

FINAL REPORT

RESEARCH TO ESTABLISH PRESENT LEVELS
OF NATIVE HARVESTING
FOR THE INUIT OF NUNAVIK

Submitted to
Coordinating Committee on
Hunting, Fishing and Trapping
Established by and in Accordance with
the James Bay and Northern Québec Agreement

Submitted by
Native Harvesting Research Committee

October 1988

(disponible en français)

This report should be cited as:

James Bay and Northern Québec Native Harvesting Research Committee 1988.
Final Report: Research to Establish Present Levels of Harvesting for the
Inuit of Northern Québec. 1976-1980. James Bay and Northern Québec
Native Harvesting Research Committee: Québec, Québec City.

Table of Contents

List of Tables and Figures	ii
SUMMARY AND PRESENTATION OF BEST ESTIMATES	iii
I. INTRODUCTION	1
Background of the Research	2
II. STUDY DESIGN AND METHODOLOGY	7
Study Objectives and Design Principles	8
Study Components and Procedures	10
Definition of Present	10
Community Participation	11
Determining the Hunter Population	11
Hunters and Reporting Units	13
Species Covered	14
Geographic Areas	14
Seasonality	16
Data Collection and Analysis	16
Calendar Design	17
Fieldwork and Data Collection	17
Automatic Data Processing	19
Data Set Integrity	19
Reported and Projected Harvests	19
Determining the Best Estimate	23
III. PHASE II FINDINGS AND BEST ESTIMATES	45
The Best Estimates	45
BIBLIOGRAPHY	
APPENDIX I. Terms of Reference	

List of Tables

Table 1.	Best Estimates	vi
Table 2.	Population of Northern Québec Settlements Phase II (Yr. 1976)	12
Table 3.	List of Species Reported in the Phase II Study	15
Table 4.	Sample of Computer Generated Data - 1976	20
Table 5.	Presentation of the Estimated Harvest for Phase I (1973-75) and for Phase II by Year (1976-80), in Numbers, by Species, and Community	25
Table 6.	Potential and Interviewed Hunters Phase I (1973-75); Phase II (1976-80)	47
Table 7.	Best Estimates. Summary of the Present Levels of Harvesting for the Inuit of Northern Québec as Established by the Native Harvesting Research Committee	48

List of Figures

Figure 1.	Map of all Nunavik communities, including a designation of the 55th parallel	3
Figure 2.	Calendar	18

SUMMARY AND PRESENTATION OF BEST ESTIMATES

In September 1975 the Northern Québec Inuit Association began a long term study entitled "Research to Establish Present Levels of Native Harvesting". At the same time, the Grand Council of the Crees of Québec began a similar study in the Cree territory. Both studies, though carried out independently, were designed and supervised under the guidance of the James Bay and Northern Québec Native Harvesting Research Committee.

The need for a rigorous study to determine the present level of Native harvesting was identified during the negotiations that led to the signing of the James Bay and Northern Québec Agreement on November 11, 1975. The parties to these negotiations were: the Government of Québec, the Government of Canada, the James Bay Development Corporation, the James Bay Energy Corporation, Hydro-Québec, the Grand Council of the Crees (of Québec) and the Northern Québec Inuit Association.

In January 1975, an agreement was reached by the Negotiating Subcommittee on Hunting, Fishing and Trapping to conduct joint studies on present levels of harvest of wildlife by the Crees and Inuit of Northern Québec. Each party to the negotiations provided financial support in equal shares, and the Research Committee with representation from all parties was given the mandate to design the study; to organize and supervise all phases of the field work and data analysis; to prepare yearly reports that would present the data and a "best estimate" of harvest levels by species and communities for each year; and to prepare a final report that would rely primarily on the results of the acquired data base when determining a final "best estimate" of the present level of harvesting for the Inuit and Cree.

The terms of reference for the Inuit study received a final approval by the negotiating committee on August 21, 1975. The study was designed to cover a seven-year period that was divided into two phases. Phase 1 was a retrospective study based on a questionnaire, and required the Inuit hunters to recall their harvests over a one or two-year period depending

upon the species. The Phase II research program was designed to monitor and record on a regular basis the actual harvests of individual hunters and their families, according to species and geographical zones. This approach relied on a system whereby the hunter used a resource calendar to update, on a weekly basis, his harvests and that of his family. The self-recording process was supported through the utilization of community based field workers who visited hunters on a regular basis. The individual records of harvests were subject to a final review and correction procedure at the end of each calendar year. This activity was carried out by a team of field workers who visited each community to interview the participating hunters and to prepare a final data sheet. For the Inuit, the Phase II study was carried out for the five year period from January 1976 to December 1980.

The study design meant that two sets of information were obtained from the Inuit study (see Table 5). The Phase I questionnaire-survey provided one set of data on harvest levels for the years 1973-1974 and 1974-1975. The Phase II self-recording and interview supported survey provided harvest information for the calendar years 1976 to 1980. The original study design called for these two data sets to be integrated as a final statement of harvest levels by community and species.

From the outset the Inuit were concerned about the ability of hunters to recall detailed harvest statistics for many species over a two-year period. They were prepared to conduct this first stage of the study but after examination of the data they felt that the figures did not accurately reflect reasonable statements of harvest. This concern was expressed by Inuit in all thirteen communities during their review of the Phase I data base. Their concerns were supported by a statistical evaluation of the Phase I data that compared the results to the findings from Phase II.

The information collected during the five-years of Phase II was considered to more closely reflect actual harvest levels since it was collected on a systematic basis that did not require the hunter to recall

harvest information except for short periods that may have been identified during the regular field interviews.

It is this information, after review by each Inuit community and by the Native Harvesting Research Committee, that was used by the Hunting, Fishing and Trapping Coordinating Committee as a basis to negotiate the final guarantees as required by the James Bay and Northern Québec Agreement. These numbers represent the "Best Estimates" that have been set for the Inuit of Northern Québec. The numbers that represent the final Best Estimate are, for the most part, an average based on the results of each of the five years. In certain cases, however, the Native Harvesting Research Committee felt that particular problems in the use of the five-year average required a different means for establishing the Best Estimate. Each of these changes is supported by a specific explanation from the Research Committee.

For each year from 1976 to 1980 the data base was developed from the projected harvest that was derived by using a proportional projection. A computer graph showing the projected harvest over the five-year period was developed for each of the 40 species. The Best Estimate was simply taken to be the arithmetic mean, or average, of the five, Phase II years' harvest values. Other possibilities were also considered for the Best Estimate, for example the median. Every one of these possibilities turns out to be weighted averages of the projected harvests, where different years may be given different weights. Since there appeared to be no a priori reason to prefer any year over any other, the mean, which weights each year equally in the average, was chosen.

The results are set out in Tables 1 and 7, and a discussion of the statistical methods are included in Section II. The computer graphs of all the data along with other tables of data for Phase II are included in Section III.

TABLE 1

BEST ESTIMATES OF HARVESTING FOR THE INUIT OF NORTHERN QUEBEC
AS ESTABLISHED BY THE NATIVE HARVESTING RESEARCH COMMITTEE

SPECIES	K U U J J U A R A P I K	N U K J U A K	A K U L I V I K	S A L L U I T	K A N G I Q S U J U A Q	Q U A Q T A Q	K A N G I R S U K	A U P A L U K	T A S I U J A Q	K U J J U A Q	K A N G I Q S U A L U J J U A Q	K I L L I N I Q	C H I S A S I B I	T O T A L
Ringed Seal	1899	2081	675	1749	2665	617	401	175	219	492	691	591	14	13302 ¹
Bearded Seal	84	190	94	128	112	40	100	25	29	86	82	55	1	1026
Harp Seal	3	7	4	28	36	7	7	1	1	3	12	139	0	248
Ranger Seal	1	6	1	1	3	1	0	0	2	4	9	4	0	32
Beluga Whale	61	106	8	60	78	55	28	8	8	32	19	13	0	476
Walrus	1	12	7	17	4	6	6	1	1	1	1	1	0	58
Polar Bear	5	13	6	3	9	5	1	2	1	1	5	7	0	58
Caribou	242	891	94	31	171	47	191	178	330	1310	1011	51	0	4547
Arctic Fox	121	1429	340	553	538	189	414	145	370	848	489	27	2	5465
Wolf	5	8	1	4	0	0	1	2	28	107	75	0	0	231
Snow Goose	2926	1209	453	3341	216	4	12	10	15	12	6	1	28	8233
Canada Goose	4672	6603	1170	732	199	207	507	177	249	1722	523	106	500	17367
Brant	478	301	15	55	1	1	2	50	5	16	18	0	33	975
Ducks ⁵	2978	3988	800	603	624	224	326	84	400	909	628	310	174	12048
Duck Eggs	1604	3439	2082	955	3222	776	1469	605	1331	1745	2562	378	43	20211
Arctic Hare	48	67	6	48	73	9	45	8	24	126	58	7	162	681
Ptarmigan	9809	8124	3420	7304	2060	2011	3776	1120	2632	17977	6852	1299	773	67157
Grouse	137	304	3	0	4	10	42	7	49	279	97	31	29	992
Snowy Owl	23	38	4	27	10	14	10	5	10	31	17	1	6	196
Murre	37	41	18	1471	227	57	126	43	37	342	121	84	15	2619
Guillemot	79	551	22	70	111	15	36	5	21	53	128	65	8	1164
Loons ⁶	440	120	29	34	58	4	18	11	8	53	67	24	35	901
Arctic Char	866	14251	13597	13054	10106	1732	9731	2353	6317	6317	19014	292	15	97645
Salmon	61	160	29	0	1	6	98	7	38	6743	632	155	0	7930
Lake Trout	818	10756	1300	970	661	543	1711	653	407	3506	1054	1	99	22479
Codfish	2481	3152	293	197	13	2	0	3	4	142	65	635	104	7091
Whitefish	4064	8063	2146	19	1	35	35	6	131	2723	469	0	1091	18783
Brook Trout	4294	1289	5	212	21	1	190	182	923	6703	3328	0	194	17342
Sculpin	4444	456	220	548	1009	659	344	506	801	2521	965	19	82	12574
Landlocked Char	94	208	6	391	250	301	227	125	53	111	170	52	0	1988

1. Based on 2 years' data (1976,1977). The community was closed in February 1978.

2. Known as Mailasi in Inuktitut.

3. 1033 added to compensate for reduction in hunt as a consequence of the mercury situation.

4. Based on 2 years' data (1979, 1980).

5. Based on 2 years' data (1979, 1980), the breakdown is 79% eider, 5% pintail, 10% scoter, 6% merganser.

6. Based on 2 years' data (1979, 1980), the breakdown is 28% common loon and 72% red-throated loon.

I. INTRODUCTION

The purpose of this final report is to describe and explain the findings from a long-term study to determine the present levels of harvesting by the Inuit of Northern Québec. The data in this report, recorded by each community, is a statement of the yearly harvests of the land and marine mammals, fish and birds regularly harvested by the Inuit of Northern Québec. From this data, a Best Estimate based on the five-year average is determined for each species and community. The report also describes the methods and procedures used to obtain the data base and to derive the Best Estimates.

The Inuit study was part of a joint program of harvesting research that included the collection of similar data from the James Bay Cree of Québec. The requirement for a harvest study was part of the James Bay and Northern Québec Agreement that was signed on November 11, 1975. Although the Inuit and Cree studies were carried out and reported on as separate projects, they were both designed and organized in relationship to a common set of objectives, terms of reference, and supervising body. The common objective as identified in the Agreement was to provide the data base needed to negotiate and establish guaranteed levels of harvesting for the Inuit and Cree populations covered by the James Bay and Northern Québec Agreement.

The final Inuit report is divided into three sections. Section I briefly explains the Inuit study, describes the purpose and mandates that applied to the Inuit and Cree, and presents a summary of findings. Section II contains a description of the methods and procedures used for the research and data processing and defines the specific terms and conditions applied to the Inuit study. Section III sets out the detailed quantitative findings for each community which are presented primarily as tables and graphs.

The Inuit study spans the seven years from 1973 to 1980, and is based on the collection of harvesting information from Inuit hunters living in

each of thirteen communities (Figure 1). It was originally designed in two phases. Phase I was comprised of a questionnaire survey administered through personal interviews, where hunters were asked to recall their harvest of particular species for the years 1973-1974 and 1974-1975. Phase II was based on a program of self-monitoring of harvests and regular interviews that required every hunter to record their harvest on a weekly basis. This phase covered the calendar years 1976 to 1980. A final report was prepared for Phase I, and for each of the other five years in Phase II, interim reports were prepared.

The quantitative information presented in this final report of the Inuit study is based on the recorded level of harvest for the years 1976 to 1980. The decision to delete the data collected during the Phase I questionnaire survey was made by the Native Harvesting Research Committee in consultation with Inuit communities. The statistical analysis that justifies this decision is discussed later in this report. It is, therefore, the information from the Phase II five-year study that provides the data base used by the Native Harvesting Research Committee for establishing the Best Estimates.

Background of the Research

Hunting, fishing and trapping continue to play an essential role in the economy and culture of the Northern Québec Inuit. In the past these activities have been primarily confined to subsistence use of food resources and the commercial sale of fur and seal skins. Subsistence harvesting continues to be important and it is certain that local wildlife resources will always be a major factor in the household and community economies of the Nunavik Inuit. It must be recognized, however, that resources other than fur and seal skins may also become important for commercial purposes either through outfitting operations or through marketing on the northern or southern markets.

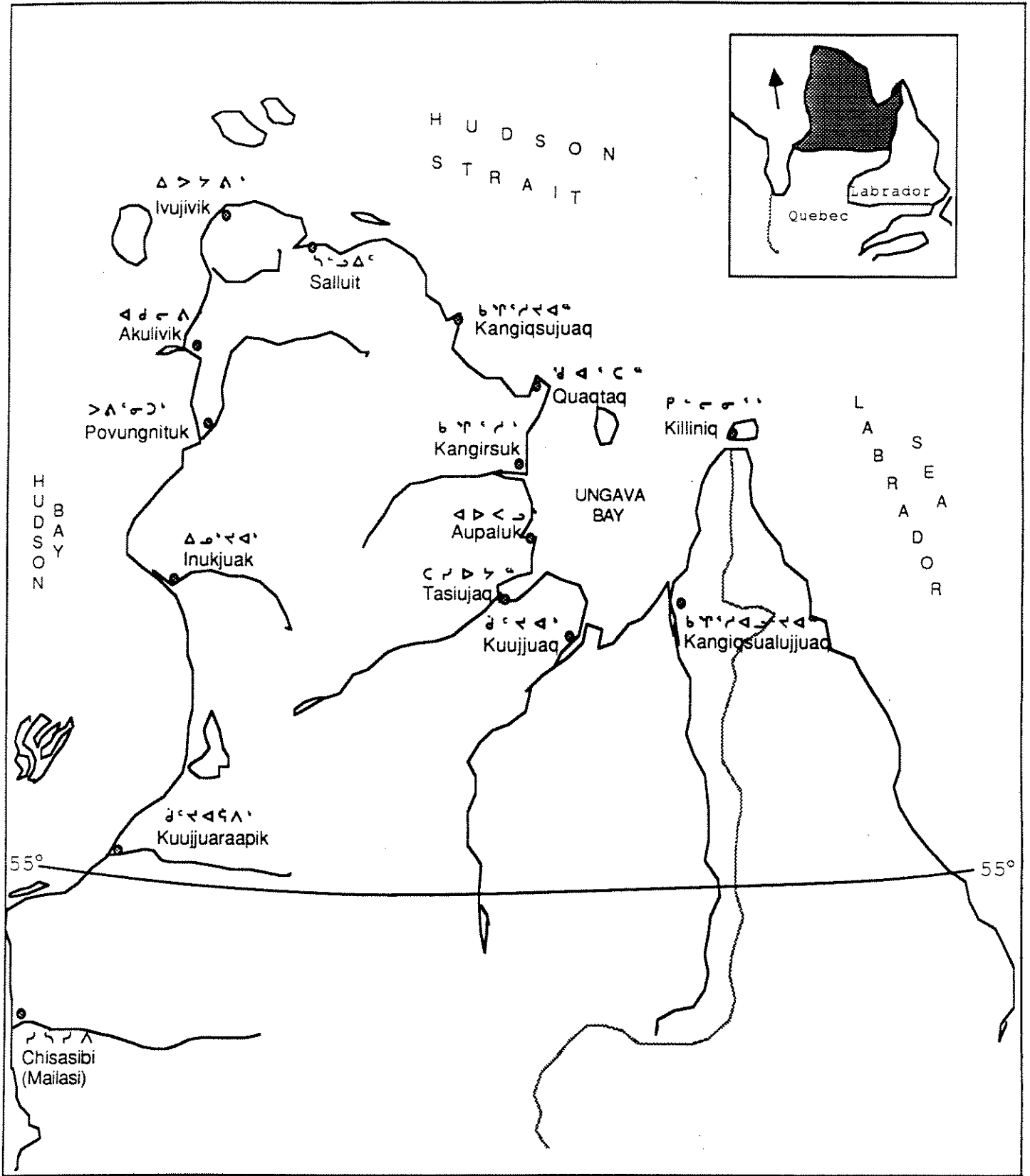


Figure 1. Inuit Communities of Nunavik (as of 1980)

Although many studies acknowledge the importance of wildlife harvesting, there have been few systematic surveys on the level of production that results from the wide range of harvesting activities practiced by Inuit. The need for a long-term quantitative study on the present levels of native harvesting by the Inuit and Cree of Québec was recognized early in the negotiations that led to the Agreement. These negotiations defined the rationale for such a study, established a mechanism to design and finance the research that would be required, and gave recognition to its role within the terms of the James Bay and Northern Québec Agreement.

The harvesting surveys carried out for the Northern Québec Inuit and the James Bay Cree represent the first large scale, long-term and adequately financed research projects on this topic. Each party to the negotiations provided financial support, and a Research Committee with representation from all parties was established to design and oversee the study for both Inuit and Cree. Terms of Reference for the "Research to Establish Present Levels of Native Harvesting" were drawn up by this Committee and provided the mandate and operational framework for this project (see Appendix I).

During the negotiations that led to the James Bay and Northern Québec Agreement there was a recognition of the importance for the priority of native harvesting and a means to protect this priority through the establishment of guaranteed levels of harvest. Section 24.6.2 of the Agreement states in part that:

"...The principle of priority of native harvesting shall mean that in conformity with the principle of conservation and where game populations permit, the Native people shall be guaranteed levels of harvesting equal to present levels of harvesting of all species in the Territory."

This section also identifies the processes that had to be initiated in order to determine and implement these guarantees. Sub-section 24.6.2a stated:

"Such guaranteed levels shall be established by negotiations between the Native parties and the responsible Provincial or Federal Government through the Coordinating Committee... and shall be based principally upon the results of the 'Research to Establish Present Levels of Native Harvesting'..."

The principle for the priority of native harvesting that is established through the creation of specific guarantees was developed as a means of balancing diverse interests in the use of animal resources throughout the territory including the marine waters. This principle affirms the importance of harvesting to the economy and culture of the Inuit but it also acknowledges that certain resources must, when game populations permit, be allocated to non-Natives for recreational hunting and fishing purposes. Section 24.6.3a., 24.6.3b. and 24.6.3c. states respectively that:

- a. If game populations permit levels of harvesting equal to the guaranteed levels established pursuant to paragraph 24.6.2, the Native people shall have the right to harvest up to the said guaranteed levels.
- b. In allocating wildlife resources for harvesting or non-Native hunting and fishing over and above the said guaranteed levels, the harvesting needs of the Native people and the needs of non-Natives for recreational hunting and fishing shall be taken into account.
- c. Subject to sub-paragraphs a) and b) there shall always be some allocations of species for non-Native sport hunting and sport fishing.

Finally, sub-section 24.6.5.f, states that:

In any given year when populations permit a kill for the Territory higher than the guaranteed allocation equal to present levels of harvesting, the Native people shall be allowed a harvest equal to the guarantee based on present levels of harvesting, and the remainder of the permissible kill for the Territory shall be divided in such a way as to ensure primarily the continuance of the traditional pursuits of the Native people and secondarily so that the non-Native people may satisfy their needs for recreational hunting.

All rights for native harvesting along with the allocation to non-Native users are subject to the principle of conservation. In the Agreement, the relationship between guaranteed levels, the allocation of resources for non-Native purposes and the principle of conservation is identified in section 24.6.3.d:

If game populations do not permit levels of harvesting equal to the guaranteed levels established pursuant to paragraph 24.6.2, the Native people shall be allocated the entire (permissible) kill and may allocate a portion of this kill to non-Natives through recognized outfitting facilities.

In addition to the specific requirements to determine the present level of harvesting as described in Section 24 of the Agreement, the information collected in the course of this study has many other important applications. For example, a data base comprised of real numbers of harvested species is essential for establishing management programs to support the principle of conservation as established in the Agreement and to support the work of the Coordinating Committee on Hunting, Fishing and Trapping. Harvest data is also required by Inuit when making decisions on the allocation of wildlife resources between differing priorities. These decisions require new information that can be applied to new and cooperative approaches for management in the North. Perhaps one of the most significant contributions of harvest study data is that it has helped to identify with precision the value of food and fur resources to the present economy and future growth of Inuit society. Without such data it would be impossible to evaluate options and to establish priorities for the sustainable development.

II. STUDY DESIGN AND METHODOLOGY

The methodology used to carry out the harvest study in all Inuit communities was developed by the Native Harvesting Research Committee in consultation with Inuit communities through the Northern Québec Inuit Association. This process led to a study design that was acceptable to southern researchers concerned with data consistency, sampling techniques, analytical procedures and statistical projections. It also resulted in a study that was acceptable for Inuit since it addressed their own concerns about data consistency and sampling techniques as well as their questions about the underlying logic of such a study, about its importance and about the best way to carry it out.

As pointed out earlier in this document, the original study design called for a two phase research program. Phase I would be carried out with a questionnaire administered through personal interviews. These interviews would establish the harvest, for each individual hunter and his household, of mammals, fish and birds during the previous one or two years depending upon the particular species. Phase II was designed as a continual recording of individual harvest information that would be carried out for five calendar years. These two phases would include a record of harvest obtained by recall or recording that would cover the years 1973 to 1980.

The Phase I study was designed in the summer of 1975 and the questionnaire based interviews were administered during the fall of that year. Phase I study was completed in January 1976. The five-year phase II study was designed in the fall of 1975, explained during the questionnaire based interviews of Phase I and the self-recording of data began in January 1976. Although a decision has been made not to consider the results of the Phase I study when establishing the best estimate, the planning and execution of Phase I was extremely important to the success of Phase II.

Phase I included the development and testing of a questionnaire, the selection and training of Inuit personnel and interviewers, administration of the questionnaire in all communities, the coding and preparation of data for computer analysis, the development and testing of a data processing computer program, and the completion of the final report. The Phase I study provided a body of harvesting data based on recall; it also initiated a process that encouraged Inuit to consider the purpose of harvest studies and it familiarized them with the data required and with the system for collecting this data.

Study Objectives and Design Principles

Both phases of the Harvest Study were to accomplish three principal objectives :

- 1) to collect the quantitative data on the harvest of all species by individual hunters who would also report for themselves and for other members of their household or social unit;
- 2) to review and analyse these data so that the results would yield the best possible estimates by species and by community of present levels of harvesting that would be stated as Best Estimates;
- 3) to illustrate clearly the manner in which these estimates were obtained and, to discuss their shortcomings and make appropriate changes.

The Inuit of Northern Québec were in agreement with these objectives, but in the community consultation that preceded the study, the hunters set out some general principles that they felt the study should follow and reinforced them with specific directives to the Research Committee.

The Inuit hunters who met to discuss the objectives and methodology for the harvest study also cautioned the Research Committee to consider five other points in the design of the specific procedures. First, the objectives and procedures should be kept simple, so that hunters would not be confused by the type or quantity of information requested, and therefore tend to reject or ignore the study because of the work it would require. Second, the study should be kept logical in relationship to the way in which hunters perceive harvesting activity to take place within communities. Third, the study must remain practical so that the results could be evaluated in relationship to specific applications and concerns that were important to Inuit hunters. Four, the study must remain flexible so that it could be modified in accordance with the growing awareness of hunters about its purpose and design. Five, the control of the study must be shared with Inuit so that they would have a continuing voice in all phases of the data collection and analysis as well as in the evaluation of the results.

These five general principles were reinforced by very specific directives from the Inuit to the Research Committee. The Inuit stated that:

1. the most important research data would be derived from the five-year study of future harvests for all Inuit communities and this data should be emphasized in the study;
2. the research should be designed to include the harvest of the entire population and not be based on a sample of hunters;
3. the process of data collection should encourage hunters to keep their own records on a form that is standardized and easy to understand. The self-recording must be supported by interviews to make sure that some hunters were not confused and to encourage all other hunters to consistently record their harvest data;

4. the collection of data recognize appropriate Inuit social units and that the social patterns and traditions that influence the ownership and distribution of resource harvests within Inuit communities such as group hunting be accounted for in the research design;
5. that the study be designed to reflect the particular resource types and seasonal cycles of the Inuit communities and that the data be collected according to a "near" and "away" geographical designation of areas;
6. that the municipal councils or equivalent community bodies be directly involved with data collection at the local level and that the organization and carrying out of both the field study and data processing be the responsibility of an Inuit director who would be responsible for the Inuit phase of the joint study.

Study Components and Procedures

The design of the Inuit harvest study was developed around the terms of reference included as Appendix I. The final design also acknowledged the concerns and suggestions raised by Inuit during the consultation that took place prior to the study.

Definition of Present

Section 24 of the James Bay and Northern Québec Agreement stipulated that a seven-year period was considered to be an adequate time frame for collecting the data needed to define "present" levels of harvesting. It was sufficient to account for certain fluctuations or changes in the resource base or in harvesting activity and it was also felt that it would be possible to sustain hunter interest and to maintain the same research staff for a project of this duration.

Community Participation

A total of 13 Inuit communities in Northern Québec participated in the study (see Figure 1 and Table 2). Povungnituk did not participate in either Phase I or Phase II. Ivujivik had limited participation in Phase I and none in Phase II. These communities withdrew their support for the James Bay and Northern Québec Agreement and therefore did not participate in the Harvest Study. A portion of the community of Salluit also withdrew support. Because of their rejection of the Agreement no attempt was made to collect the harvest data for Povungnituk or Ivujivik. In Salluit, however, the participation rate in the study was sufficient to make estimates for the entire community, and the Municipal Council approved the study and wanted to be involved in the creation of a guaranteed level of harvest.

Determining the Hunter Population

For the purpose of this study a potential hunter was defined as any male 18 years of age or older who was able to hunt during the study period. From each official community population list all males 18 years of age and over were identified, their birthdate was recorded and each was assigned a code that would protect confidentiality throughout the study.

All of the names on this hunter list were then reviewed annually in the community and individuals who were considered to be permanent non-hunters because of physical or other reasons were deleted. Thus, all males 18 and over, minus non-hunters, equals potential hunters.

This process allowed the creation of hunter lists that were revised for each of the five years of the study. Every year, there were a small number of adult males who were considered to be independent hunters. These persons were also interviewed and received calendars. It was made clear that their harvests were not to be included in the totals of the male head of the household, as is normally done for younger hunters.

TABLE 2
Population of Northern Québec Settlements
Phase II (Yr. 1976)

Community	Population
Kuujjuarapik	558
Inukjuak	530
Akulivik	140
Salluit	377
Kangiqsujuaq	241
Quaqtaq	116
Kangirsuk	263
Aupaluk	47
Tasiujaq	94
Kuujjuaq	687
Kangiqsualujjuaq	286
Killiniq	56
Chisasibi (Mailasi)	42
Total	3,427

Hunters and Reporting Units

The structure of Inuit social organization and the traditional ways in which hunters group together for certain harvesting activities had to be considered during the design of the study and throughout all of the collection process. The normal social groupings were also complicated by the extreme shortage in housing which meant that more than one family unit would often share the same dwelling.

The system of data collection had to recognize the individual identity of each adult male, but it also had to account for this person in relationship to a larger social group of which he was a member. In order to do this, each individual hunter who was given a calendar was asked to identify the other individuals, usually spouse or children, who might also harvest. Each individual was asked to record these "other" harvests on his calendar. In certain situations two individuals who would always hunt together were given the choice of having one or two calendars. The procedure tried to emphasize separate calendars for each hunter but when this confused the system of self-recording other arrangements were made and noted.

The practice of group hunting also created problems with the maintenance of a self-recording system. Group hunting could range from a canoe of two or three people to a major part of the community all joining forces for a particular hunt. No well-defined procedures could be established that would automatically eliminate problems of over or under recording the harvest level from group hunts. The emphasis to prevent this from happening was based on a continual warning to hunters about this problem and encouraging them to decide among themselves who would note the actual harvest on a calendar. Since the most persistent problem with group hunting involved beluga whale the actual hunter who was recognized by Inuit tradition to have killed the whale was asked to record. Problems arising from group hunts especially for large games species were also reduced during the interview process and at the time the community was asked to review the yearly figures.

Species Covered

The Inuit Harvest Study identified approximately 30 species (Table 3). Certain problems arose when there was a difference in the names given by Inuit to individual species, as compared to the categories used by non-Natives. For example, there is no general word for "duck" in Inuktitut. There are "flyers" representing all birds or there are specific words for each type of duck. Other problems arose because species important in some areas were not necessarily important in others; yet the calendars could not accommodate such distinctions. The list of species also changed somewhat as Inuit became more familiar with the study and also because towards the end of the study the Research Committee felt that certain distinctions in the categories should be made.

Geographic Areas

The Inuit recognized that geographic regions are important and should be recorded along with harvest information but they also stated that it would be very difficult to make precise geographical distinctions and still maintain a simple system of data recording. Part of the problem would be caused by having hunters trying to remember how many specimens they harvested in a given location; another difficulty would be the use of specific place names in Inuktitut, which would further complicate data collection and analysis. The Inuit territory does not have long recognized political or social distinctions such as the Cree traplines, and any distinction created artificially would probably not have the same meaning to different hunters.

The Inuit stated that at this time the most logical distinction in territory would be based on distance from the community. Therefore they wanted to divide the hunting territory into "near" and "far". "Near" was defined as being within one-day travel even though hunters might spend more than one day in this area without returning to the community. For

Table 3
List of Species Reported in the Phase II Study

<u>English</u>	<u>French</u>	<u>Latin</u>	<u>Inuktitut</u>
Ringed Seal	Phoque annelé	<i>Phoca hispida</i>	Δ ^c P ^c
Bearded Seal	Phoque barbu	<i>Erignathus barbatus</i>	Δ ^c Δ ^c Δ ^c
Harp Seal	Phoque du Groenland	<i>Phoca groenlandicus</i>	'b Δ P ^c
Harbour Seal	Phoque commun	<i>Phoca vitulina</i>	'b P ^c Δ ^c
Beluga Whale	Béluga	<i>Delphinapterus leucas</i>	'P Δ Δ Δ ^c
Walrus	Morse	<i>Odobenus rosmarus</i>	Δ Δ Δ ^c
Polar Bear	Ours blanc	<i>Urus maritimus</i>	Δ Δ Δ ^c
Caribou	Caribou	<i>Rangifer tarandus</i>	Δ Δ Δ ^c
Wolf	Loup	<i>Canis lupus</i>	Δ Δ P Δ ^c
Arctic Fox	Renard arctique	<i>Alopex Lagopus</i>	Δ Δ Δ ^c Δ ^c
Snow Geese	Oie blanche	<i>Anser caerulescens atlantica</i>	b Δ Δ ^c
		<i>Anser caerulescens caerulescens</i>	
Canada Geese	Bernache canadienne	<i>Branta canadensis</i>	Δ ^c Δ ^c
Ducks	Canards	<i>Somateria mollissima</i>	
		<i>Somateria spectabilis</i>	
		<i>Anas acuta</i>	Δ Δ Δ ^c
		<i>Anas rubripes</i>	Δ Δ Δ ^c
		<i>Melanitta perspicillata</i>	Δ Δ Δ ^c
		<i>Mergus serrator serrator</i>	P Δ C b Δ Δ Δ ^c / Δ Δ Δ ^c
		<i>Mergus merganser</i>	Δ Δ Δ ^c Δ ^c
Murre	Marmette	<i>Uria lomvia</i>	Δ Δ Δ ^c
Guillemot	Guillemot	<i>Cepphus grylle ultimus</i>	Δ Δ Δ ^c
Loons	Huat à collier	<i>Gavia immer</i>	Δ Δ Δ ^c
	Huat à gorge rousse	<i>Gavia stellata</i>	b Δ Δ ^c
		<i>Gavia arctica</i>	
Arctic Char	Omble chevalier	<i>Salvelinus alpinus</i>	Δ Δ Δ ^c Δ ^c
Salmon	Saumon	<i>Salmo salar</i>	Δ Δ Δ ^c
Lake Trout	Touladi	<i>Salvelinus namaycush</i>	Δ Δ Δ ^c Δ ^c
Brook Trout	Omble de fontaine	<i>Salvelinus fontinalis</i>	Δ Δ Δ ^c
Cod	Morue	<i>Gadus morhua</i>	Δ Δ Δ ^c
		<i>Microgadus tomcod</i>	
		<i>Boreogadus saida</i>	
Whitefish	Corégone	<i>Coregonus clupeaformis</i>	b Δ Δ ^c
		<i>Prosopium cylindraceum</i>	
		<i>Coregonus artedii</i>	
Sculpin	Chabot	<i>Myoxocephalus quadricornis</i>	< Δ Δ Δ ^c / b Δ Δ ^c
Land-locked Char	Omble chevalier non anadrome	<i>Salvelinus alpinus</i>	Δ Δ Δ ^c
Arctic Hare	Lièvre arctique	<i>Lepus arcticus</i>	Δ Δ Δ ^c
Rock Ptarmigan	Lagopède des rochers	<i>Lagopus mutus</i>	Δ Δ Δ ^c
Willow Ptarmigan	Lagopède des saules	<i>Lagopus lagopus</i>	Δ Δ Δ ^c
Grouse	Tétras	<i>Canachites canadensis</i>	
Snowy Owl	Harfang des neiges	<i>Nyctea scandiaca</i>	Δ Δ Δ ^c

most communities this proved to be an area of approximately 25 miles. The designation "far" was everything outside this boundary. The specific geographic designation for the near area was established through community consultation and was clearly outlined on a map provided with the calendar. At the time of the year end interview, each hunter was asked to create a general land use map that designated the primary hunting territory by species for the previous calendar year.

Seasonality

Both the Inuit and the Research Committee recognized that certain seasonal designations were important for defining the present level of harvest and for establishing guarantees. The calendar system was based on a weekly recording unit which would enable any seasonal designations to be made during the analysis of the data. The most important designations recognized by the Research Committee involved the spring and fall harvest of Arctic char and other sea run fish. Canada geese and Snow geese were also given a spring and fall designation.

Data Collection and Analysis

All basic information for Phase II was to be recorded in three stages. The first was a system of self-recording to be completed by the hunter on a regular basis using a calendar designed for this purpose. The second stage was to be a systematic review and upgrading of this information by regular interviews with local field workers. The third stage was a "year-end" collection of information that would be done by local field workers with the assistance of a travelling group of interviewers. This information was then used as the basis for review by the Inuit to determine its accuracy and consistency. It was then entered onto computer cards for automatic data processing and error checking. From this, it was possible to establish the reported harvest and to determine the projected harvest.

Calendar Design

A calendar was selected by Inuit as the most easily understood device for recording their harvest. The design of this calendar was established after numerous discussions with hunters. The format was based on the yearly calendar on which a hunter could record his and his family's harvest on a weekly basis. All harvest were recorded for zone I (near) and zone II (away). During the five years some small changes were made in the calendar format at the suggestion of Inuit but the basic design remained consistent. An example of the calendar format is given in Figure 2.

Fieldwork and Data Collection

The data recording calendars were distributed in December of each year to all hunters. Inuit interviewers were hired in each community and trained by Makivik Corporation staff. These interviewers were responsible for updating the calendars throughout the year, and to interview the hunters at the end of the year and collect the calendars. They were also available to the hunters to answer questions and provide assistance throughout the research year.

An important contribution to the study was made by the Inuit members of the Hunting, Fishing and Trapping Coordinating Committee. These persons maintained a frequent contact with the communities regarding the research by making regular broadcasts on local FM radion stations to remind hunters about the research and emphasize the necessity for continual and accurate data recording.

The calendars were collected in January of the following year by a team of travelling field workers that always included a representative from the Makivik executive and from senior Inuit and non-Native staff. The field workers reviewed the calendars in the presence of each hunter and condensed the weekly information to monthly figures in the totals

column of the calendar. The calendars were then sent to Kuujuuaq for coding on specially designed coding sheets. During this process the weekly data was compiled into monthly totals for near and away. Through this procedure each calendar could be examined once again and any questions raised by the Inuit researchers could be resolved through a telephone call to the community and on occasion, by a trip for additional interviews. This process was intensive and involved an intuitive as well as an objective review of information. After this process was completed the data sheets were sent to Montreal for keypunching and processing.

Automatic Data Processing

The automatic data processing for each of the five-years that Inuit harvests were surveyed began with a large number (approximately 2,500) of punched cards representing coded responses from the completed interviews. There were four cards per interview and the processing involved three distinct activities: error checking for data set integrity; reporting the actual harvests and making projections to the entire population of hunters. A sample of the harvest data that characterized Phase II is illustrated in Table 4.

Data Set Integrity. The integrity of the data set is crucial to the accuracy of the harvest projections. To uncover errors of coding and keypunching, each coded interview was examined by a computer program that sought, and reported, possible errors. For each community, this program identified, for each species, the hunter who reported the greatest harvest. If his harvest was improbably large, i.e. 500 whales, his questionnaire was checked. The process was repeated until all maximal harvests were verified as correct.

Reported and Projected Harvests. The data reported by the interviewers was summarized in various ways. In addition, certain projections from the sample were made to give imputed total harvests values to the entire population of potential hunters. These data appear in tables, one for each species, containing information for each community's activities with respect to that species.

TABLE 4
Sample of Computer Generated Data - 1976

(NHR 1976)

REPORTED AND ESTIMATED HARVESTS OF SALMON

	REPORTED HARVEST			ESTIMATED HARVEST			WEIGHTS (100LB)	WEIGHT/ CU/DAY	WEIGHT % (COM) (SPEC)	
	* NEAR	AWAY	TOTAL	*** NEAR	AWAY	TOTAL*	REP.	EST **		
(P= 95, I= 86)	1*	0	0	0	0	0	0.0	0.0**	0.14	
GREAT WHALE	2*	0	16	0	18	18	1.4	1.5**		
(N1= 0, N2= 2)	3*	0	33	0	36	36	2.8	3.1**		
(N3= 3)	T*	0	49	0	54	54	4.2	4.6** 0.00	0.56	
(P=112, I=109)	1*	195	0	195	200	0	200	16.6	17.0**	0.91
INUKJUAK	2*	218	14	232	224	14	238	19.7	20.2**	
(N1= 5, N2= 6)	3*	87	50	137	89	51	141	11.6	12.0**	
(N3= 9)	T*	500	64	564	513	65	579	47.9	49.2** 0.03	5.98
(P= 55, I= 49)	1*	0	0	0	0	0	0.0	0.0**	0.01	
WAKEHAM BAY	2*	0	4	4	0	4	0.3	0.3**		
(N1= 0, N2= 1)	3*	0	0	0	0	0	0.0	0.0**		
(N3= 0)	T*	0	4	4	0	4	0.3	0.3** 0.00	0.04	
(P= 31, I= 30)	1*	0	0	0	0	0	0.0	0.0**	0.12	
KOARTAK	2*	0	16	16	0	17	17	1.4	1.4**	
(N1= 0, N2= 1)	3*	0	0	0	0	0	0.0	0.0**		
(N3= 0)	T*	0	16	16	0	17	17	1.4	1.4** 0.00	0.18
(P= 41, I= 41)	1*	0	17	17	0	17	17	1.4	1.4**	0.09
PAYNE BAY	2*	1	0	1	1	0	1	0.1	0.1**	
(N1= 1, N2= 1)	3*	0	1	1	0	1	1	0.1	0.1**	
(N3= 1)	T*	1	18	19	1	18	19	1.6	1.6** 0.00	0.20
(P= 8, I= 8)	1*	1	0	1	1	0	1	0.1	0.1**	0.04
AUPALUK	2*	0	1	1	0	1	1	0.1	0.1**	
(N1= 1, N2= 1)	3*	0	0	0	0	0	0.0	0.0**		
(N3= 0)	T*	1	1	2	1	1	2	0.2	0.2** 0.00	0.02
(P= 17, I= 15)	1*	0	0	0	0	0	0.0	0.0**	0.19	
LEAF BAY	2*	0	0	0	0	0	0.0	0.0**		
(N1= 0, N2= 0)	3*	22	0	22	25	0	25	1.9	2.1**	
(N3= 3)	T*	22	0	22	25	0	25	1.9	2.1** 0.01	0.26
(P=135, I=127)	1*	4	10	14	4	11	15	1.2	1.3**	14.22
FORT CHIMO	2*	697	852	1549	741	906	1647	131.7	140.0**	
(N1= 4, N2= 35)	3*	5305	753	6058	5639	800	6440	514.9	547.4**	
(N3= 64)	T*	6006	1615	7621	6384	1717	8102	647.8	688.7** 0.37	83.73
(P= 53, I= 53)	1*	270	11	281	270	11	281	23.9	23.9**	1.54
GEORGE RIVER	2*	72	110	182	72	110	182	15.5	15.5**	
(N1= 7, N2= 22)	3*	298	0	298	298	0	298	25.3	25.3**	
(N3= 14)	T*	640	121	761	640	121	761	64.7	64.7** 0.08	7.86
(P= 10, I= 10)	1*	0	0	0	0	0	0.0	0.0**	1.34	
PORT BURWELL	2*	9	0	9	9	0	9	0.8	0.8**	
(N1= 0, N2= 1)	3*	104	0	104	104	0	104	8.8	8.8**	
(N3= 7)	T*	113	0	113	113	0	113	9.6	9.6** 0.06	1.17
(P=670, I=598)	1*	470	38	508	475	39	514	43.2	43.7**	
TOTALS	2*	997	1013	2010	1047	1070	2117	170.9	179.9**	
(N1= 18, N2= 70)	3*	5816	837	6653	6155	888	7045	565.5	598.8**	
(N3=101)	T*	7283	1888	9171	7677	1997	9676	779.5	822.5** 0.09	2.61

The species described in a given table is mentioned in the heading line, for example, "REPORTED AND ESTIMATED HARVESTS OF RINGED SEAL".

The name of the community appears to the left of the block of lines unique to it. Above the community name is written the number of potential hunters and the number actually interviewed. These appear as "(P __, and I __)". P for potential and I for interviewed.

Of the interviewed hunters in that community, some did not harvest the particular species of the table. The number of those who did is reported as "(N__)", if the species is harvested throughout the year; as "(N1__)" and "(N2__)" if the species has two hunting seasons; and as "(N1__), (N2__), and (N3__)" if, as with some fish species, there are three harvest seasons.

Projection Methods. Although hunter coverage was reasonably high in each year, this coverage represents only those who were willing and able to be interviewed. Accordingly, this is a non-random sample and estimates of population parameters based on it are ad hoc.

A proportional projection was used : suppose there are R responding hunters in a given community with P R potential hunters. For a given species suppose R respondents harvested respectively $H_1, H_2 \dots, H_r$ animals for a reported total of

$$H = H_1 \dots H_r,$$

with an average of $A = H/R$ animals per respondent. The proportional projection is

$$E1 = P.A$$

It will be correct if the missing P-R hunters harvest an average of A animals.

Initially, two estimators of total harvest were considered. The first may be called the proportional projection and describe immediately above. The second estimate that was considered is the finite population 90% confidence level for estimated total harvest, using the normal approximation for the distribution of an average.

Specifically write

$$V = [(H_1-A)^2 \dots (H_r-A)^2] / (R-1)$$

for the sample variance of reported harvests. Then the estimator is defined by

$$E2 = \text{Max} [H + (P - R) (A - 1.28 \sqrt{P V / (R(P-R))}) , H] \\ \text{Max} [E1 - 1.28 \sqrt{P V (P-R) / R} , H]$$

The first term in square roots is the estimated harvest variance, corrected for the finite sample. The expression shows clearly that E2 > E1 and this means that E2 is more conservative. If the sample were random and P large, E2 would underestimate about 90% of the time. If A is about the median (H_1), (whether or not the H_i are symmetrically distributed) E1 would underestimate about half the time. However, with the certain knowledge that the sample is not random, these intuitions may be incorrect.

To study how E1 and E2 might be expected to behave on a non-random sample drawn like the present one, a simulation technique was devised and used. The R interviews were dated. Therefore one can "sample" the first (earliest) 89% of the R interviews as a basis for estimating the known harvest H. Doing this for the 13 communities and each hunting season one can then compare how frequently E1 > H and E2 > H. Furthermore, the variance of E1 and E2 may be calculated and compared. Finally the sampling percent may vary from 89% in repetitions of the procedure.

The results give a clear indication that E1 is a far superior estimator:

- (1) E1 > H occurred from between 45-55% of the time, depending on the sampling percent that was used. Thus it appears to behave roughly as a median.
- (2) E2 > H occurred 92-97% of the time. It appears more conservative than a 90% confidence level.

(3) $(E1-H)^2$ was 20-30% smaller than $(E2-H)^2$ depending on the sampling percent.

A less conservative modification (avoiding the finite sample correction for the variance) of E2 was also considered and tested in the above fashion. It, too, seemed inferior to E1, but better than E2. Because the simulation technique can give only a rough suggestion about how to compare the properties of estimators, the search for "good" estimators was terminated at this point and E1 was adopted as a satisfactory projection method.

Determining the Best Estimate

The data for Phase II of the Inuit harvest study is presented in Section III. This information is illustrated in a series of tables and graphs. The tables include the projected harvest for each of the five years and the Best Estimate derived from this data. The graphs plot data for the year according to each species and its hunting season for all communities. These 40 species units are defined by the species and by the sub-division of the harvest of that species where required into seasons.

For each year from 1976 through 1980 the data base was developed from the projected harvest that were derived by using the proportional projection as described above. A computer graph showing the projected harvest over the five-year period was developed for each of the 40 species units. A dashed horizontal line portrays the mean value of the Phase II harvest for the species, hunting season and community for all of the graphs.

The Best Estimate was simply taken to be the arithmetic mean, or average, of the five, phase II years' harvest values. Other possibilities were also considered for the Best Estimate, for example the median. Every one of these possibilities turns out to be weighted averages of the

projected harvests, where different years may be given different weights. Since there appeared to be no a priori reason to prefer any year over any other, the mean, which weights each year equally in the average, was chosen. Another argument in favor of the mean as Best Estimate is related to variability: the sums of the squared deviations of the harvest values from some point p is minimized when p is taken to be the mean.

The Phase I projections were not included in the graphical presentation and were not used in the determination of the Best Estimate. The Phase I projections tended to be higher than those of Phase II over the 528 community-hunting seasons considered in the study. In light of the fact that the Phase I projections were made from data in a small, non-random sample of hunters, it seemed prudent to exclude them from the Best Estimate calculation.

The Phase I projections were seen to be larger than those for the Phase II years in several ways. First, in more than 60 percent of the hunting seasons, the largest projection occurred in one of the two Phase I years. However, if harvests were declining during the seven years comprised in the study, one might expect Phase I (the earlier years) to produce larger values than the average. To test the possibility that Phase I values were larger simply because harvests were decreasing over time, a straight line was fit to the seven years of the study harvests of a community-hunting season. In more than 60% of the community-hunting seasons, the largest deviation from the fit line occurred in a Phase I year. This finding would seem to rule out an explanation of large Phase I values due to a downward trend in the data and suggest that the Phase I projections were indeed, high.

A comparison of the results from Phase I and the five-years (1976-1980) of Phase II are illustrated in Table 5.

TABLE 5
 Presentation of the Estimated Harvest for Phase I (1973-75) and for Phase II by Year (1976-1980),
 in Numbers, by Species, and Community

MARINE MAMMALS

Community	Year	Ringed Seal		Bearded Seal		Harp Seal		Ranger Seal		Beluga Whale		Walrus		Polar Bear	
		Seal	Seal	Seal	Seal	Seal	Seal	Seal	Seal	Whale	Whale	Walrus	Walrus	Bear	Bear
Kuujuarapik	1973-75	1,210	73	3	1	26	1	12	1						
	1976	3,276	107	2	1	60	1	9	2						
	1977	2,114	66	2	0	55	0	1	0						
	1978	1,282	42	0	2	51	2	0	0						
	1979	1,375	92	8	0	63	0	4	0						
	1980	1,452	111	5	0	75	0	3	0						
Inukjuak	1973-75	2,322	217	16	0	97	0	10	6						
	1976	2,833	198	11	9	79	9	8	1						
	1977	2,671	194	3	0	124	0	10	4						
	1978	1,281	71	0	22	62	22	4	3						
	1979	1,776	204	12	1	120	1	27	40						
	1980	1,842	285	11	0	144	0	16	10						
Akulivik	1973-75	1,207	151	8	1	5	1	11	14						
	1976	956	101	3	0	4	0	12	25						
	1977	842	63	2	0	2	0	6	0						
	1978	210	59	1	0	7	0	3	0						
	1979	839	143	11	3	28	3	7	4						
	1980	530	105	1	0	1	0	4	7						

TABLE 5 (cont)

MARINE MAMMALS

Community	Year	Ringed	Bearded	Harp	Ranger	Beluga	Walrus	Polar
		Seal	Seal	Seal	Seal	Whale		Bear
Salluit	1973-75	1,583	251	134	3	122	58	5
	1976	2,591	180	43	0	66	23	11
	1977	2,623	95	23	2	104	2	0
	1978	787	71	8	0	36	0	0
	1979	1,264	138	25	0	42	10	2
1980	1,482	155	39	0	50	50	4	
Kangiqsujuaq	1973-75	4,809	301	153	2	162	4	19
	1976	4,740	213	58	6	98	4	4
	1977	2,624	92	61	0	118	8	8
	1978	1,313	64	27	1	62	0	16
	1979	2,451	98	15	1	74	0	10
	1980	2,195	95	18	8	37	9	9
Quaqtaq	1973-75	895	49	12	0	31	11	7
	1976	1,117	64	8	5	55	5	3
	1977	725	49	14	0	85	7	2
	1978	281	11	1	0	39	0	4
	1979	499	39	9	0	30	8	6
1980	462	37	4	0	65	12	9	
Kangirsuk	1973-75	1,122	223	7	0	43	13	24
	1976	781	124	7	0	44	7	1
	1977	495	122	2	0	79	11	2
	1978	243	71	2	0	10	2	0
	1979	246	92	1	0	4	1	0
1980	239	90	23	0	4	10	0	

TABLE 5 (cont)

MARINE MAMMALS

Community	Year	Ringed Seal		Bearded Seal		Harp Seal		Ranger Seal		Beluga Whale		Walrus		Polar Bear	
Aupalukl	1973-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1976	278	37	4	0	6	0	1	0	31	0	1	0	2	0
	1977	125	15	0	0	0	0	0	0	4	0	0	0	6	0
	1978	106	18	0	0	0	0	0	0	0	0	0	0	0	0
	1979	258	37	1	1	0	0	0	0	0	0	0	0	1	1
1980	106	17	0	0	0	0	0	0	0	0	0	0	0	0	
Tasiujaq	1973-75	213	55	0	24	7	0	0	0	7	0	0	0	0	0
	1976	487	56	0	1	3	0	2	1	3	0	2	0	2	0
	1977	209	25	0	4	23	0	0	4	23	0	0	0	1	0
	1978	122	21	0	3	0	0	0	3	0	0	0	0	0	0
	1979	92	18	1	0	3	0	0	0	3	0	0	0	0	0
1980	184	26	0	1	11	0	1	0	11	0	0	0	0	0	
Kuujuuaq	1973-75	752	166	40	31	53	0	0	31	53	0	0	0	4	0
	1976	706	119	2	3	102	0	0	3	102	0	0	0	0	0
	1977	718	131	1	3	30	0	0	3	30	0	0	0	2	0
	1978	318	58	4	1	13	0	0	1	13	0	0	0	1	0
	1979	414	36	4	1	34	0	0	1	34	15	15	1	1	0
1980	303	86	2	12	31	0	0	12	31	7	7	0	5	0	
Kangihsualujjuaq	1973-75	635	99	16	3	19	0	0	3	19	1	1	0	4	0
	1976	1,446	127	34	6	20	0	0	6	20	1	1	0	12	0
	1977	772	62	20	2	15	0	0	2	15	0	0	0	7	0
	1978	374	35	1	5	10	0	0	5	10	0	0	0	3	0
	1979	363	93	0	1	37	0	0	1	37	1	1	0	0	0
1980	502	91	6	31	14	0	0	31	14	0	0	0	5	0	

TABLE 5 (cont)

MARINE MAMMALS

Community	Year	Ringed	Bearded	Harp	Ranger	Beluga	Walrus	Polar
		Seal	Seal	Seal	Seal	Whale		bear
Killiniq	1973-75	789	83	363	44	8	3	14
	1976	652	70	100	6	9	0	8
	1977	530	40	178	2	16	2	6
	1978	-	-	-	-	-	-	-
	1979	-	-	-	-	-	-	-
	1980	-	-	-	-	-	-	-
Chisasibi (Mailasi)	1973-75	0	0	0	0	0	0	0
	1976	0	0	0	0	0	0	0
	1977	-	-	-	-	-	-	-
	1978	20	2	0	0	0	0	0
	1979	21	0	0	0	0	0	0
	1980	-	-	-	-	-	-	-
TOTAL	1973-75	15,537	1,668	752	109	573	111	110
	1976	19,865	1,396	272	37	546	71	72
	1977	14,448	954	306	13	682	34	51
	1978	6,337	523	44	34	294	5	39
	1979	9,598	990	87	8	435	79	58
	1980	9,297	1,098	109	52	432	105	55

1 in Phase I, Aupaluk was not distinguished from Kangirsuk.

TABLE 5 (cont)

LAND MAMMALS

Community	Year	Caribou	Wolf	Arctic Fox
Kuujjuarapik	1973-75	171	5	254
	1976	384	4	208
	1977	140	3	32
	1978	212	6	115
	1979	238	7	39
	1980	235	6	210
Inukjuak	1973-75	1,353	2	2,669
	1976	809	0	1,629
	1977	936	6	1,455
	1978	819	9	1,807
	1979	853	16	670
	1980	1,037	7	1,583
Akulivik	1973-75	187	0	467
	1976	83	0	280
	1977	76	1	118
	1978	78	0	823
	1979	152	0	386
	1980	82	0	94
Salluit	1973-75	15	0	1,683
	1976	0	0	133
	1977	29	2	1,042
	1978	22	14	891
	1979	52	0	583
	1980	50	4	118

TABLE 5 (cont)

LAND MAMMALS

Community	Year	Caribou	Wolf	Arctic Fox
Kangiqsu juaq	1973-75	66	0	453
	1976	71	0	237
	1977	139	0	569
	1978	227	0	1,335
	1979	184	0	421
	1980	235	0	127
Quaqtaq	1973-75	40	0	377
	1976	69	1	233
	1977	24	0	318
	1978	24	0	247
	1979	29	0	49
	1980	90	0	100
Kangirsuk	1973-75	185	0	800
	1976	104	0	196
	1977	144	1	847
	1978	186	0	772
	1979	234	1	72
	1980	287	0	184
Aupaluk	1973-75	-	-	-
	1976	44	2	29
	1977	71	2	128
	1978	110	0	296
	1979	442	1	88
	1980	225	3	182

TABLE 5 (cont)

LAND MAMMALS

Community	Year	Caribou	Wolf	Arctic Fox
Tasiujaq	1973-75	298	7	248
	1976	352	9	188
	1977	212	6	324
	1978	390	10	494
	1979	283	53	376
1980	412	61	468	
Kuujuuaq	1973-75	1,800	94	1,206
	1976	1,313	62	438
	1977	1,508	98	493
	1978	1,351	139	2,103
	1979	1,203	147	460
1980	1,175	87	744	
Kangiqsualujuaq	1973-75	1,038	59	417
	1976	1,204	53	340
	1977	887	67	156
	1978	921	93	1,017
	1979	1,193	76	373
1980	849	84	560	
Killiniq	1973-75	185	13	221
	1976	80	0	47
	1977	22	0	6
	1978	-	-	-
	1979	-	-	-
1980	-	-	-	

TABLE 5 (cont)

LAND MAMMALS

Community	Year	Caribou	Wolf	Arctic Fox
Chisasibi (Mailasi)	1973-75	0	0	2
	1976	0	0	2
	1977	-	-	-
	1978	0	0	2
	1979	0	0	1
	1980	-	-	-
TOTAL	1973-75	5,338	180	8,797
	1976	4,513	131	3,960
	1977	4,183	186	5,488
	1978	4,340	271	9,902
	1979	4,863	301	3,518
	1980	4,677	252	4,370

TABLE 5 (cont)

WATERFOWL AND EGGS

Community	Year	Snow		Canada		Ducks		Duck		Murre	Guillemot	Loons
		Geese	Geese	Geese	Geese	Eggs	Eggs					
Kuujuarapik	1973-75	3,204	3,275	972	8,633	8	249	200				
	1976	1,314	5,292	2,849	1,543	11	192	682				
	1977	600	4,992	3,686	4,538	45	45	316				
	1978	577	3,870	3,164	963	84	92	360				
	1979	7,528	5,419	4,061	373	25	26	537				
	1980	4,610	3,787	3,520	602	21	38	306				
Inukjuak	1973-75	1,531	6,120	3,913	23,964	46	1,143	543				
	1976	1,420	6,484	4,117	5,228	40	1,009	138				
	1977	1,666	6,355	3,794	254	67	373	57				
	1978	847	5,781	2,093	638	63	522	14				
	1979	890	8,094	4,939	6,130	17	486	116				
	1980	1,222	6,300	5,810	4,945	16	364	276				
Akulivik	1973-75	1,651	2,433	1,730	6,759	106	135	27				
	1976	613	1,820	1,022	1,732	19	55	30				
	1977	420	727	705	1,985	9	38	85				
	1978	325	818	415	695	57	0	2				
	1979	449	1,313	1,013	4,212	4	14	26				
	1980	458	1,174	921	1,788	0	1	1				
Salluit	1973-75	5,509	1,075	1,287	25,264	3,216	90	47				
	1976	2,025	621	982	1,682	2,508	158	34				
	1977	1,083	328	555	761	963	18	34				
	1978	2,727	477	208	27	449	25	27				
	1979	6,538	1,249	1,055	1,901	2,087	130	55				
	1980	4,330	984	582	406	1,349	18	21				

TABLE 5 (cont)

WATERFOWL AND EGGS

Community	Year	Snow Geese		Canada Geese		Ducks		Duck Eggs		Murre	Guillemot	Loons
Kangiqsujuaq	1973-75	411	204	1,272	7,729	1,422	393	67				
	1976	429	319	1,203	3,316	672	338	27				
	1977	88	96	528	6,994	341	109	11				
	1978	24	59	252	1,182	36	32	5				
	1979	175	239	565	2,592	80	59	34				
	1980	363	283	577	2,025	8	16	215				
Quaqtaq	1973-75	8	169	589	3,108	273	56	13				
	1976	6	351	389	2,040	148	22	6				
	1977	0	202	158	669	45	17	12				
	1978	15	121	95	385	18	27	0				
	1979	0	223	204	315	39	8	3				
	1980	1	140	277	470	35	0	1				
Kangirsuk	1973-75	3	795	955	3,851	807	179	55				
	1976	6	531	540	2,157	277	115	15				
	1977	25	553	282	2,507	195	32	13				
	1978	1	451	173	598	33	10	11				
	1979	22	441	364	944	103	15	35				
	1980											
Aupaluk	1973-75	-	-	-	-	-	-	-				
	1976	24	75	105	396	66	10	17				
	1977	0	75	67	800	54	10	1				
	1978	0	109	90	1,214	38	1	1				
	1979	27	157	158	381	31	1	24				
	1980	0	469	249	233	24	2	10				

TABLE 5 (cont)

WATERFOWL AND EGGS

Community	Year	Show Geese	Canada Geese	Ducks	Duck Eggs	Murre	Guillemot	Loons
Tasiujaq	1973-75	1	449	494	4,267	69	52	55
	1976	23	343	567	1,972	67	83	9
	1977	0	225	410	828	20	4	6
	1978	40	197	244	443	72	10	7
	1979	0	208	391	1,120	25	1	11
	1980	13	271	415	2,293	0	6	9
Kuujuuaq	1973-75	2	2,858	2,002	20,926	1,225	354	176
	1976	11	2,281	1,539	1,113	775	98	70
	1977	16	2,422	1,290	3,582	271	55	44
	1978	3	1,609	696	956	328	18	74
	1979	22	1,149	524	2,081	214	79	48
	1980	6	1,149	578	995	122	14	29
Kangiqaualujjuaq	1973-75	6	570	871	5,016	238	312	117
	1976	8	624	1,180	4,729	221	288	100
	1977	1	467	422	2,553	159	125	87
	1978	4	537	567	2,105	103	59	42
	1979	0	421	671	2,535	76	125	83
	1980	16	568	391	890	48	41	25
Killiniq	1973-75	1	230	507	1,242	400	74	46
	1976	1	106	379	335	86	118	19
	1977	0	106	240	420	82	12	28
	1978	-	-	-	-	-	-	-
	1979	-	-	-	-	-	-	-
	1980	-	-	-	-	-	-	-

TABLE 5 (cont)

WATERFOWL AND EGGS

Community	Year	Snow Geese		Canada Geese		Ducks		Duck Eggs		Murre	Guillemot	Loons
Chisasibi (Mailasi)	1973-75	144	570	259	563	10	27	11				
	1976	15	312	67	36	0	19	12				
	1977	-	-	-	-	-	-	-				
	1978	25	638	261	74	45	4	83				
	1979	44	551	292	19	0	0	9				
1980	-	-	-	-	-	-	-	-				
TOTAL	1973-75	12,471	18,748	14,851	111,322	7,820	3,063	1,357				
	1976	5,895	19,159	14,849	26,279	4,890	2,505	1,159				
	1977	3,899	16,548	12,137	25,891	2,251	838	694				
	1978	4,588	14,667	8,258	11,189	1,488	822	628				
	1979	15,695	19,464	14,046	22,257	2,676	939	957				
	1980	11,019	15,566	13,684	15,591	1,726	515	928				

TABLE 5 (cont)

FISH

Community	Year	Arctic Char	Salmon	Lake Trout	Cod-Fish	White Fish	Brook Trout	Sculpin	Land-locked Char
Kuujuarapik	1973-75	319	15	680	5,754	4,855	3,565	2,899	0
	1976	1,423	54	1,631	4,782	7,121	6,947	5,777	0
	1977	1,499	184	1,180	3,276	3,301	5,346	3,306	93
	1978	695	66	231	1,832	1,496	1,672	5,073	0
	1979	334	0	643	1,361	3,905	3,262	3,862	371
	1980	381	2	405	1,154	4,491	4,241	4,200	7
Inukjuak	1973-75	28,960	29	9,990	6,947	13,970	3,988	140	118
	1976	19,445	579	10,530	3,508	8,470	1,887	779	425
	1977	15,284	0	10,997	3,777	5,513	1,137	338	92
	1978	9,405	172	9,113	2,587	5,407	881	326	134
	1979	13,835	30	12,377	2,750	10,564	1,359	475	222
	1980	13,287	19	10,761	3,140	10,361	1,182	360	165
Akulivik	1973-75	20,991	0	5,972	906	14,709	289	278	0
	1976	21,007	0	1,870	705	6,025	22	243	21
	1977	8,267	143	1,869	146	1,566	0	179	3
	1978	11,317	0	707	223	630	0	123	8
	1979	14,035	0	1,092	291	1,177	4	482	0
	1980	13,361	0	963	53	1,332	0	75	0
Salluit	1973-75	18,193	1	1,560	184	1	14	516	578
	1976	19,638	0	1,554	672	36	16	1,230	566
	1977	7,525	0	1,114	61	27	59	593	197
	1978	7,792	0	486	123	27	25	263	71
	1979	12,527	0	836	104	4	10	219	650
	1980	17,789	21	858	25	0	949	435	470

TABLE 5 (cont)

FISH

Community	Year	Arctic Char	Salmon	Lake Trout	Cod-Fish	White Fish	Brook Trout	Sculpin	Land-locked Char
Kangiqsujuaq	1973-75	17,979	1	702	90	22	0	48	0
	1976	10,426	4	755	31	3	73	2,376	519
	1977	8,141	97	950	8	0	23	540	264
	1978	6,340	0	630	11	0	0	763	138
	1979	9,975	0	563	7	0	7	657	223
1980	15,650	0	405	8	0	0	708	108	
Quaqtaq	1973-75	1,581	0	374	2	210	4	457	234
	1976	2,357	17	649	2	151	2	762	465
	1977	2,387	13	430	6	22	5	477	149
	1978	678	0	601	3	0	0	263	171
	1979	1,786	0	540	0	0	0	645	218
1980	1,453	0	496	1	2	0	1,146	503	
Kangirsuk	1973-75	25,798	8	2,294	5	25	749	971	0
	1976	12,961	19	1,781	4	42	224	511	262
	1977	8,600	277	1,353	0	33	319	58	190
	1978	9,580	6	2,235	6	81	176	570	304
	1979	8,770	0	1,363	0	6	166	413	200
1980	8,743	190	1,823	24	11	66	169	177	
Aupaluk	1973-75	-	-	-	-	-	-	-	-
	1976	2,371	2	217	5	6	215	370	26
	1977	1,881	2	384	9	6	367	509	161
	1978	2,717	15	422	0	0	256	545	136
	1979	2,685	17	481	0	20	70	748	93
1980	2,112	0	1,762	0	0	3	359	211	

1
3
8
1

TABLE 5 (cont)

FISH

Community	Year	Arctic Char	Salmon	Lake Trout		Cod-Fish	White Fish	Brook Trout	Sculpin	Land-Locked Char		
				Trout	Trout					Locked	Char	
Tasiujaq	1973-75	4,997	701	742		0	448	462	316		135	
	1976	5,817	25	536		0	142	750	1,409		90	
	1977	4,525	27	471		19	191	951	1,364		18	
	1978	8,775	97	404		0	65	1,371	437		86	
	1979	7,948	31	369		1	69	824	471		52	
	1980	4,521	8	256		0	188	718	325		20	
Kuujuuaq	1973-75	13,884	10,423	8,314		1,056	7,260	17,261	5,391		325	
	1976	9,328	8,102	5,146		619	5,333	7,606	4,871		198	
	1977	10,050	5,159	3,262		8	2,250	6,946	3,348		134	
	1978	4,329	5,362	3,512		42	2,030	5,917	1,415		55	
	1979	3,202	5,230	2,627		34	1,661	6,342	1,420		82	
	1980	4,676	9,862	2,983		6	2,343	6,704	1,551		87	
Kangiqualuujjaq	1973-75	28,393	712	1,798		109	369	5,398	0		0	
	1976	28,972	761	1,481		152	1,294	4,753	1,015		446	
	1977	20,986	919	1,251		103	185	2,928	660		172	
	1978	17,509	699	815		25	589	2,277	491		85	
	1979	16,461	604	748		32	51	4,622	1,134		60	
	1980	11,231	175	973		12	226	2,060	1,524		88	
KILLINIQ	1973-75	4,774	486	24		4,265	20	142	112		0	
	1976	217	113	0		1,270	0	0	19		11	
	1977	366	196	2		0	0	0	18		92	
	1978	-	-	-		-	-	-	-	-		-
	1979	-	-	-		-	-	-	-	-		-
	1980	-	-	-		-	-	-	-	-		-

TABLE 5 (cont)

FISH

Community	Year	Arctic		Salmon	Lake		Cod- Fish	White Fish	Brook Trout	Sculpin	Land-	
		Char	0		Trout	locked					Char	
Chisasibi (Maillasi)	1973-75	0	0	0	218	60	322	0	0	0	0	0
	1976	32	0	0	132	200	1,156	40	200	0	0	0
	1977	-	-	-	-	-	-	-	-	-	-	-
	1978	14	0	0	20	86	1,654	324	47	0	0	0
	1979	0	0	0	144	27	464	217	0	0	0	0
	1980	-	-	-	-	-	-	-	-	-	-	-
TOTAL	1973-75	165,889	12,376	32,668	19,378	42,211	31,872	11,562	1,390			
	1976	133,994	9,676	26,282	11,995	29,785	22,535	19,562	3,029			
	1977	89,511	7,017	23,263	7,413	13,094	18,081	11,390	1,565			
	1978	79,151	6,417	19,176	4,938	11,979	12,899	10,316	1,188			
	1979	76,558	5,912	21,666	4,607	17,921	16,883	10,526	2,171			
	1980	93,204	10,277	21,685	4,423	18,954	15,923	10,852	1,836			

TABLE 5 (cont)

SMALL GAME

Community	Year	Arctic Hare	Grouse and Ptarmigan	Snowy Owl
Kuujuarapik	1973-75	66	7,426	38
	1976	44	9,471	14
	1977	82	8,325	8
	1978	18	11,478	17
	1979	51	10,588	61
	1980	43	9,868	13
Inukjuak	1973-75	122	10,135	257
	1976	137	9,651	61
	1977	89	11,995	60
	1978	68	7,884	21
	1979	21	5,484	9
	1980	18	7,128	41
Akuivik	1973-75	0	6,796	83
	1976	0	3,842	1
	1977	12	3,071	7
	1978	5	3,252	9
	1979	3	3,516	0
	1980	10	3,435	4
Salluit	1973-75	64	11,464	203
	1976	23	6,888	16
	1977	32	7,206	48
	1978	47	8,431	47
	1979	36	5,564	25
	1980	100	8,432	1

TABLE 5 (cont)

SMALL GAME

Community	Year	Arctic Hare	Grouse and Ptarmigan	Snowy Owl
Kangiqsujuaq	1973-75	118	4,339	32
	1976	126	2,179	4
	1977	69	2,093	19
	1978	85	1,695	16
	1979	52	2,670	10
	1980	31	1,681	0
Quaqtaq	1973-75	2	1,477	5
	1976	7	1,372	0
	1977	5	3,470	7
	1978	14	1,593	3
	1979	11	1,797	3
	1980	9	1,875	59
Kangirsuk	1973-75	71	10,507	38
	1976	93	3,549	1
	1977	72	5,206	15
	1978	35	3,987	10
	1979	9	2,856	0
	1980	17	3,490	25
Aupaluk	1973-75	-	-	-
	1976	3	1,105	1
	1977	8	659	6
	1978	4	801	3
	1979	14	1,572	3
	1980	13	1,498	10

TABLE 5 (cont)

SMALL GAME

Community	Year	Arctic Hare	Grouse and Ptarmigan	Snowy Owl
Tasiujaq	1973-75	46	1,465	4
	1976	11	3,034	1
	1977	38	3,472	26
	1978	38	2,458	22
	1979	14	2,416	1
1980	19	2,023	2	
Kuujuuaq	1973-75	193	16,212	70
	1976	145	17,724	3
	1977	177	25,822	62
	1978	125	19,014	57
	1979	77	16,012	7
1980	105	12,708	28	
Kangiqsualujjuaq	1973-75	99	10,773	30
	1976	74	6,180	15
	1977	56	8,947	4
	1978	40	7,936	50
	1979	66	6,168	6
1980	53	5,516	11	
Killiniq	1973-75	20	2,428	3
	1976	4	843	0
	1977	10	1,816	2
	1978	-	-	-
	1979	-	-	-
1980	-	-	-	

TABLE 5 (cont)

SMALL GAME

Community	Year	Arctic Hare	Grouse and Ptarmigan	Snowy Owl
Chisasibi (Mailasi)	1973-75	0	90	0
	1976	16	175	0
	1977	-	-	-
	1978	279	1,658	11
	1979	192	572	8
	1980	-	-	-
TOTAL	1973-75	801	83,112	763
	1976	683	66,013	117
	1977	650	82,082	264
	1978	620	70,187	266
	1979	546	59,215	133
	1980	418	57,654	194

III. PHASE II FINDINGS AND BEST ESTIMATES

The methods, procedures and specific data units that were used to define the research and to collect and analyse harvesting information were described in the previous section. The findings that resulted from the procedures provided the data base that was then used by the Research Committee to derive the Best Estimates. The statistical procedure was based on proportional projections to establish the estimated harvest of each species for each year. The arithmetic means or average of these values was considered the most appropriate way to derive the Best Estimates. For certain species, this data was considered by the Research Committee, to be incomplete. Therefore, the Best Estimates do not conform with the five-year average. Specific reasons for these changes have been stated by the Research Committee.

The Best Estimates

Two sets of information were obtained from the Inuit study. The Phase I questionnaire-survey provided one set of data on harvest levels for the years 1973-1974 and 1974-1975. The Phase II self-recording and interview-supported survey provided harvest information for the years 1976 to 1980. The original study design called for these two data sets to be integrated as a final statement of harvest levels by community and species. From the outset the Inuit were concerned about the ability of hunters to recall detailed harvest statistics for many species over a two-year period. They were prepared to conduct this first stage but after examination of the data they felt that the figures did not accurately represent reasonable statements of harvest. This concern was expressed by Inuit in all thirteen communities during their review of the data base. Their concerns were supported by a statistical evaluation of the phase I data in relationship to the findings from Phase II.

The information collected during the five-years of Phase II was considered to more closely reflect actual harvest levels since it

was collected on a systematic basis that did not require the hunter to recall harvest information except for short periods that may have been identified during the regular field interviews. The emphasis on Phase II is also supported by the level of response as indicated by the ratio of potential and interviewed hunters (Table 6).

It is this information, after review by each Inuit community and by the Native Harvesting Research Committee, that was then approved by the Research Committee, and later used by the Hunting, Fishing and Trapping Coordinating Committee as a basis to negotiate the final guarantees as required by the Agreement. A summary of the five-year findings is presented in Table 6. These numbers represent the Best Estimates that have been set for the Inuit of Northern Québec. The numbers representing the final Best Estimates are, for the most part, an average based on the results of each of the five years. In one instance, however, the Native Harvesting Research Committee felt that a particular problem in the use of the five-year average required a different means for establishing the Best Estimates.

As a consequence of high levels of mercury found in the Inuit population during a survey conducted by the Federal Department of National Health and Welfare in 1977, a warning was issued to Inuit, in 1978, to reduce the consumption of ringed seal, the species thought to be the largest contributor to the problem.

To compensate for the reduction in ringed seal harvesting in 1978, the Research Committee took an average of the five-year harvest for all communities (12,269) then removed the 1978 figure and produced an average for four years (13,302). The difference between the two averages (1,033) was added to the five-year average for a Best Estimate of 13,302.

A series of tables and graphs are presented describing the data for the five-year Phase II program by year, by community and by species.

TABLE 6
Potential and Interviewed Hunters
Phase I (1973-75); Phase II (1976-80)

Community	1976		1977		1978		1979		1980	
	Pot.	Int. %	Pot.	Int. %	Pot.	Int. %	Pot.	Int. %	Pot.	Int. %
Kuujuarapik	95	86 91	92	81 88	84	74 88	99	72 73	90	78 87
Inukjuak	112	109 97	109	78 72	124	96 77	141	106 75	137	97 71
Akulivik	29	21 72	43	38 88	40	35 88	54	39 72	52	36 69
Salluit	79	44 56	77	34 44	74	27 36	94	45 48	66	48 73
Kangirsujuaq	55	49 89	43	38 88	55	41 75	59	42 71	45	43 96
Quartaq	31	30 97	27	26 96	27	20 74	31	27 87	26	22 85
Kangirsuk	41	41 100	52	44 85	49	41 84	49	40 82	47	39 83
Aupaluk	8	8 100	8	7 88	10	8 80	17	13 76	19	12 63
Tasiujaq	17	15 88	18	17 94	19	18 95	26	23 88	27	23 85
Kuujuuaq	135	127 94	164	144 88	163	151 93	170	160 94	162	140 86
Kangiqsualujuaq	53	53 100	55	47 85	64	49 77	65	51 78	62	50 81
Killiniq ¹	10	10 100	8	4 50	-	- -	-	- -	-	- -
Chisasibi (Mailasi)	5	5 100	N/D	N/D -	9	5 56	4	3 75	N/D	N/D -
TOTAL	670	598 89	696	558 80	726	565 78	809	621 77	733	588 80

¹ Community was closed in February 1978 and the hunters relocated to other Nunavik communities.

TABLE 7

BEST ESTIMATES OF HARVESTING FOR THE INUIT OF NORTHERN QUEBEC
AS ESTABLISHED BY THE NATIVE HARVESTING RESEARCH COMMITTEE

SPECIES	K U U J J U A R A P I K	I N U K J U A K	A K U L I V I K	S A L L U I T	K A N G I Q S U J U A Q	Q U A Q T A Q	K A N G I R S U K	A U P A L U K	T A S I U J A Q	K U J J U A Q	K A N G I Q S U A L U J J U A Q	K I L L I N I Q	C H I S A S I B I	T O T A L
Ringed Seal	1899	2081	675	1749	2665	617	401	175	219	492	691	591	14	13302*
Bearded Seal	84	190	94	128	112	40	100	25	29	86	82	55	1	1026
Harp Seal	3	7	4	28	36	7	7	1	1	3	12	139	0	248
Ranger Seal	1	6	1	1	3	1	0	0	2	4	9	4	0	32
Beluga Whale	61	106	8	60	78	55	28	8	8	32	19	13	0	476
Walrus	1	12	7	17	4	6	6	1	1	1	1	1	0	58
Polar Bear	5	13	6	3	9	5	1	2	1	1	5	7	0	58
Caribou	242	891	94	31	171	47	191	178	330	1310	1011	51	0	4547
Arctic Fox	121	1429	340	553	538	189	414	145	370	848	489	27	2	5465
Wolf	5	8	1	4	0	0	1	2	28	107	75	0	0	231
Snow Goose	2926	1209	453	3341	216	4	12	10	15	12	6	1	28	8233
Canada Goose	4672	6603	1170	732	199	207	507	177	249	1722	523	106	500	17367
Brant ⁴	478	301	15	55	1	1	2	50	5	16	18	0	33	975
Ducks ⁵	2978	3988	800	603	624	224	326	84	400	909	628	310	174	12048
Duck Eggs	1604	3439	2082	955	3222	776	1469	605	1331	1745	2562	378	43	20211
Arctic Hare	48	67	6	48	73	9	45	8	24	126	58	7	162	681
Ptarmigan	9809	8124	3420	7304	2060	2011	3776	1120	2632	17977	6852	1299	773	67157
Grouse	137	304	3	0	4	10	42	7	49	279	97	31	29	992
Snowy Owl	23	38	4	27	10	14	10	5	10	31	17	1	6	196
Murre	37	41	18	1471	227	57	126	43	37	342	121	84	15	2619
Guillemot	79	551	22	70	111	15	36	5	21	53	128	65	8	1164
Loons ⁶	440	120	29	34	58	4	18	11	8	53	67	24	35	901
Arctic Char	866	14251	13597	13054	10106	1732	9731	2353	6317	6317	19014	292	15	97645
Salmon	61	160	29	0	1	6	98	7	38	6743	632	155	0	7930
Lake Trout	818	10756	1300	970	661	543	1711	653	407	3506	1054	1	99	22479
Codfish	2481	3152	293	197	13	2	0	3	4	142	65	635	104	7091
Whitefish	4064	8063	2146	19	1	35	35	6	131	2723	469	0	1091	18783
Brook Trout	4294	1289	5	212	21	1	190	182	923	6703	3328	0	194	17342
Sculpin	4444	456	220	548	1009	659	344	506	801	2521	965	19	82	12574
Landlocked Char	94	208	6	391	250	301	227	125	53	111	170	52	0	1988

1. Based on 2 years' data (1976,1977). The community was closed in February 1978.
2. Known as Mailasi in Inuktitut.
3. 1033 added to compensate for reduction in hunt as a consequence of the mercury situation.
4. Based on 2 years' data (1979, 1980).
5. Based on 2 years' data (1979, 1980), the breakdown is 79% eider, 5% pintail, 10% scoter, 6% merganser.
6. Based on 2 years' data (1979, 1980), the breakdown is 28% common loon and 72% red-throated loon.

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: KUJJUARAPIK

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	3,276	2,114	1,282	1,375	1,452	9,499	1,899
Bearded Seal	107	66	42	92	111	418	84
Harp Seal	2	2	0	8	5	17	3
Ranger Seal	1	0	2	0	0	3	1
Beluga Whale	60	55	51	63	75	304	61
Walrus	2	0	0	0	0	2	.4
Polar Bear	9	1	8	4	3	25	5
Caribou	384	140	212	238	235	1,209	242
Wolf	4	3	6	7	6	26	5
Arctic Fox	208	32	115	39	210	604	121
Snow Goose	1,314	600	577	7,528	4,610	14,629	2,926
Canada Goose	5,292	4,992	3,870	5,419	3,787	23,360	4,672
Brant + Duck	2,849	3,686	3,164	4,061	3,520	17,280	3,456
Duck Eggs	1,543	4,538	963	373	602	8,019	1,604
*Goose Eggs	---	---	---	19	0	19	10
Murre	11	45	84	25	21	186	37
Gullinot	192	45	92	26	38	393	79
Loon	682	316	360	537	306	2,201	440
Arctic Hare	44	82	18	51	43	238	48
Grouse/Ptarmigan	9,471	8,325	11,478	10,588	9,868	49,730	9,946
Snowy Owl	14	8	17	61	13	113	23
Arctic Char	1,423	1,499	695	334	381	4,332	866
Salmon	54	184	66	0	2	306	61
Lake Trout	1,631	1,180	231	643	405	4,090	818
Codfish	4,782	3,276	1,832	1,361	1,154	12,405	2,481
Whitefish	7,127	3,301	1,496	3,905	4,491	20,320	4,064
Brook Trout	6,947	5,346	1,672	3,262	4,241	21,468	4,294
Sculpin	5,777	3,306	5,073	3,862	4,200	22,218	4,444
Land-locked Char	0	93	0	371	7	471	94

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: INUKJUAK

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	2,833	2,671	1,281	1,776	1,842	10,403	2,081
Bearded Seal	198	194	71	204	285	952	190
Harp Seal	11	3	0	12	11	37	7
Ranger Seal	9	0	22	1	0	32	6
Beluga Whale	79	124	62	120	144	529	106
Walrus	1	4	3	40	10	58	12
Polar Bear	8	10	4	27	16	65	13
Caribou	809	936	819	853	1,037	4,454	891
Wolf	0	6	9	16	7	38	8
Arctic Fox	1,629	1,455	1,807	670	1,583	7,144	1,429
Snow Goose	1,420	1,666	847	890	1,222	6,045	1,209
Canada Goose	6,484	6,355	5,781	8,094	6,300	33,014	6,603
Brant + Duck	4,117	3,794	2,093	4,939	5,810	20,753	4,151
Duck Eggs	5,228	254	638	6,130	4,945	17,195	3,439
*Goose Eggs	---	---	---	826	806	1,632	816
Murre	40	67	63	17	16	203	41
Gullilemot	1,009	373	522	486	364	2,754	551
Loon	138	57	14	116	276	601	120
Arctic Hare	137	89	58	21	18	333	67
Grouse/Ptarmigan	9,651	11,995	7,884	5,484	7,128	42,142	8,428
Snowy Owl	61	60	21	9	41	192	38
Arctic Char	19,445	15,284	9,405	13,835	13,287	71,256	14,251
Salmon	579	0	172	30	19	800	160
Lake Trout	10,530	10,997	9,113	12,377	10,761	53,778	10,756
Codfish	3,508	3,777	2,587	2,750	3,140	15,762	3,152
Whitefish	8,470	5,513	5,407	10,564	10,361	40,315	8,063
Brook Trout	1,887	1,137	881	1,359	1,182	6,446	1,289
Sculpin	779	338	326	475	360	2,278	456
Land-locked Char	425	92	134	222	165	1,038	208

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: AKULIVIK

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	956	842	210	839	530	3,377	675
Bearded Seal	101	63	59	143	105	471	94
Harp Seal	3	2	1	11	1	18	4
Ranger Seal	0	0	0	3	0	3	1
Beluga Whale	4	2	7	28	1	42	8
Walrus	25	0	0	4	7	36	7
Polar Bear	12	6	3	7	4	32	6
Caribou	83	76	78	152	82	471	94
Wolf	0	1	0	0	0	1	.2
Arctic Fox	280	118	823	386	94	1,701	340
Snow Goose	613	420	325	449	458	2,265	453
Canada Goose	1,820	727	818	1,313	1,174	5,852	1,170
Brant + Duck	1,022	705	415	1,013	921	4,076	815
Duck Eggs	1,732	1,985	695	4,212	1,788	10,412	2,082
*Goose Eggs	---	---	---	498	1,377	1,875	938
Murre	19	9	57	4	0	89	18
Guillemot	55	38	0	14	1	108	22
Loon	30	85	2	26	1	144	29
Arctic Hare	0	12	5	3	10	30	6
Grouse/Ptarmigan	3,842	3,071	3,252	3,516	3,435	17,116	3,423
Snowy Owl	1	7	9	0	4	21	4
Arctic Char	21,007	8,267	11,317	14,035	13,361	67,987	13,597
Salmon	0	143	0	0	0	143	29
Lake Trout	1,870	1,869	707	1,092	963	6,501	1,300
Codfish	750	146	223	291	53	1,463	293
Whitefish	6,025	1,566	630	1,177	1,332	10,730	2,146
Brook Trout	22	0	0	4	0	26	5
Sculpin	243	179	123	482	75	1,102	220
Land-locked Char	21	3	8	0	0	32	6

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: SALLUIT

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	2,591	2,623	787	1,264	1,482	8,747	1,749
Bearded Seal	180	95	71	138	155	639	128
Harp Seal	43	23	8	25	39	138	28
Ranger Seal	0	2	0	0	0	2	.4
Beluga Whale	66	104	36	42	50	298	60
walrus	23	2	0	10	50	85	17
Polar Bear	11	0	0	2	4	17	3
Caribou	0	29	22	52	50	153	31
wolf	0	2	14	0	4	20	4
Arctic Fox	133	1,042	891	583	118	2,767	553
Snow Goose	2,025	1,083	2,727	6,538	4,330	16,703	3,341
Canada Goose	621	328	477	1,249	984	3,659	732
Brant + Duck	892	555	208	1,055	582	3,292	658
Duck Eggs	1,682	761	27	1,901	406	4,777	955
*Goose Eggs	---	---	---	0	0	0	0
Murre	2,508	963	449	2,087	1,349	7,356	1,471
Guillemot	158	18	25	130	18	349	70
Loon	34	34	27	55	21	171	34
Arctic Hare	23	32	47	36	100	238	48
Grouse/Ptarmigan	6,888	7,206	8,431	5,564	8,432	36,521	7,304
Snowy Owl	16	48	47	25	1	137	27
Arctic Char	19,638	7,525	7,792	12,527	17,789	63,271	13,054
Salmon	0	0	0	0	0	0	0
Lake Trout	1,554	1,114	486	836	858	4,848	970
Codfish	672	61	123	104	25	985	197
Whitefish	36	27	27	4	0	94	19
Brook Trout	16	59	25	10	949	1,059	212
Sculpin	1,230	593	263	219	435	2,740	548
Land-locked Char	566	197	71	650	470	1,954	391

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: KANGIQUJUUAQ

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	4,740	2,624	1,313	2,451	2,195	13,323	2,665
Bearded Seal	213	92	64	98	95	562	112
Harp Seal	58	61	27	15	18	179	36
Ranger Seal	6	0	1	1	8	16	3
Beluga Whale	98	118	62	74	37	389	78
Walrus	4	8	0	0	9	21	4
Polar Bear	4	9	16	10	9	47	9
Caribou	71	139	227	184	235	856	171
Wolf	0	0	0	0	0	0	0
Arctic Fox	237	569	1,335	421	127	2,689	538
Snow Goose	429	88	24	175	363	1,079	216
Canada Goose	319	96	59	239	283	996	199
Brant + Duck	1,203	528	252	565	577	3,125	625
Duck Eggs	3,316	6,994	1,182	2,592	2,025	16,109	3,222
Goose Eggs	---	---	---	30	42	72	36
Murre	672	341	36	80	8	1,137	227
Guillemot	338	109	32	59	16	554	111
Loon	27	11	5	34	215	292	58
Arctic Hare	126	69	85	52	31	363	73
Grouse/Ptarmigan	2,179	2,093	1,695	2,670	1,681	10,318	2,064
Snowy Owl	4	19	16	10	0	49	10
Arctic Char	10,426	8,141	6,340	9,975	15,650	50,532	10,106
Salmon	4	0	0	0	0	4	1
Lake Trout	755	950	630	563	405	3,303	661
Codfish	31	8	11	7	8	65	13
Whitefish	3	0	0	0	0	3	.6
Brook Trout	73	23	0	7	0	103	21
Sculpin	2,376	540	763	657	708	5,044	1,009
Land-locked Char	519	264	138	223	108	1,252	250

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: QUAQTAQ

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	1,117	725	281	499	462	3,084	617
Bearded Seal	64	49	11	39	37	200	40
Harp Seal	8	14	1	9	4	36	7
Ranger Seal	5	0	0	0	0	5	1
Beluga Whale	55	85	39	30	65	274	55
Walrus	5	7	0	8	12	32	6
Polar Bear	3	2	4	6	9	24	5
Caribou	69	24	24	29	90	236	47
Wolf	1	0	0	0	0	1	.2
Arctic Fox	233	318	247	49	100	947	195
Snow Goose	6	0	15	0	1	22	4
Canada Goose	351	202	121	223	140	1,037	207
Brant + Duck	389	158	95	204	277	1,123	225
Duck Eggs	2,040	669	385	315	470	3,879	776
*Goose Eggs	---	---	---	36	21	57	29
Murre	148	45	18	39	35	285	57
Guillemot	22	17	27	8	0	74	15
Loon	6	12	0	3	1	22	4
Arctic Hare	7	5	14	11	9	46	9
Grouse/PTarmigan	1,372	3,470	1,593	1,797	1,875	10,107	2,021
Snowy Owl	0	7	3	3	59	72	14
Arctic Char	2,357	2,387	678	1,786	1,453	8,661	1,732
Salmon	17	13	0	0	0	30	6
Lake Trout	649	430	601	540	496	2,716	543
Codfish	2	6	3	0	1	12	2
Whitefish	151	22	0	0	2	175	35
Brook Trout	2	5	0	0	0	7	1
Sculpin	762	477	263	645	1,146	3,293	659
Land-locked Char	465	149	171	218	503	1,506	301

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: KANGIRSUK

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	781	495	243	246	239	2,004	401
Bearded Seal	124	122	71	92	90	499	100
Harp Seal	7	2	2	1	23	- 35	7
Ranger Seal	0	0	0	0	0	0	0
Beluga Whale	44	79	10	4	4	141	28
Walrus	7	11	2	1	10	31	6
Polar Bear	1	2	0	0	0	3	1
Caribou	104	144	186	234	287	955	191
Wolf	0	1	0	1	0	2	.4
Arctic Fox	196	847	772	72	184	2,071	414
Snow Goose	6	25	1	22	4	58	12
Canada Goose	531	553	451	441	558	2,534	507
Brant + Duck	540	282	173	364	285	1,644	328
Duck Eggs	2,157	2,507	598	944	1,139	7,345	1,469
*Goose Eggs	---	---	---	127	265	392	196
Murre	277	195	33	103	23	631	126
Guillemot	115	32	10	15	8	180	36
Loon	15	13	11	35	16	90	18
Arctic Hare	93	72	35	9	17	226	45
Grouse/Ptarmigan	3,549	5,206	3,987	2,856	3,490	19,088	3,818
Snowy Owl	1	15	10	0	25	51	10
Arctic Char	12,961	8,500	9,580	8,770	8,743	48,654	9,731
Salmon	19	277	6	0	190	492	98
Lake Trout	1,781	1,353	2,235	1,363	1,823	8,555	1,711
Codfish	0	0	0	0	0	0	0
Whitefish	42	33	81	6	11	173	35
Brook Trout	224	319	176	166	66	951	190
Sculpin	511	58	570	413	169	1,721	344
Land-locked Char	262	190	304	200	177	1,133	227

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: AUPALUK

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	278	125	106	258	106	873	175
Bearded Seal	37	15	18	37	17	124	25
Harp Seal	4	0	0	1	0	5	1
Ranger Seal	0	0	0	1	0	1	.2
Beluga Whale	6	31	4	0	0	41	8
Walrus	1	0	0	0	0	1	.2
Polar Bear	2	6	0	1	0	9	2
Caribou	44	71	110	442	225	892	178
Wolf	2	2	0	1	3	8	2
Arctic Fox	29	128	296	88	182	723	145
Snow Goose	24	0	0	27	0	51	10
Canada Goose	75	75	109	157	469	885	177
Brant + Duck	105	67	90	158	249	669	134
Duck Eggs	396	800	1,214	381	233	3,024	605
*Goose Eggs	---	---	---	288	390	678	339
Murre	66	54	38	31	24	213	43
Guillemot	10	10	1	1	2	24	5
Loon	17	1	1	24	10	53	11
Arctic Hare	3	8	4	14	13	42	8
Grouse/Ptarmigan	1,105	659	801	1,572	1,498	5,635	1,127
Snowy Owl	1	6	3	3	10	23	5
Arctic Char	2,371	1,881	2,717	2,685	2,112	11,766	2,353
Salmon	2	2	15	17	0	36	7
Lake Trout	217	384	422	481	1,762	3,266	653
Codfish	5	9	0	0	0	14	3
Whitefish	6	6	0	20	0	32	6
Brook Trout	215	367	256	70	3	911	182
Sculpin	370	509	545	748	359	2,531	506
Land-locked Char	26	161	136	93	211	627	125

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: TASIUJAQ

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	487	209	122	92	184	1,094	219
Bearded Seal	56	25	21	18	26	146	29
Harp Seal	0	0	0	1	0	1	.2
Ranger Seal	1	4	3	0	1	9	2
Beluga Whale	3	23	0	3	11	40	8
Walrus	2	0	0	0	0	2	.4
Polar Bear	2	1	0	0	0	3	1
Caribou	352	212	390	283	412	1,649	330
Wolf	9	6	10	53	61	139	28
Arctic Fox	188	324	494	376	468	1,850	370
Snow Goose	23	0	40	0	13	76	15
Canada Goose	343	225	197	208	271	1,244	249
Brant + Duck	567	410	244	391	415	2,027	405
Duck Eggs	1,972	828	443	1,120	2,293	6,656	1,331
*Goose Eggs	---	---	---	28	5	33	17
Murre	67	20	72	25	0	184	37
Guillemot	83	4	10	1	6	104	21
Loon	9	6	7	11	9	42	8
Arctic Hare	11	38	38	14	19	120	24
Grouse/Ptarmigan	3,034	3,472	2,458	2,416	2,023	13,403	2,681
Snowy Owl	1	26	22	1	2	52	10
Arctic Char	5,817	4,525	8,775	7,948	4,521	31,586	6,317
Salmon	25	27	97	31	8	188	38
Lake Trout	536	471	404	369	256	2,036	407
Codfish	0	19	0	1	0	20	4
Whitefish	142	191	65	69	188	655	131
Brook Trout	750	951	1,371	824	718	4,614	923
Sculpin	1,409	1,364	437	471	325	4,006	801
Land-locked Char	90	18	86	52	20	266	53

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: KUUJJUAQ

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	706	718	318	414	303	2,459	492
Bearded Seal	119	131	58	36	86	430	86
Harp Seal	2	1	4	4	2	13	3
Ranger Seal	3	3	1	1	12	20	4
Beluga Whale	102	30	13	34	31	210	42
Walrus	0	0	0	15	7	22	4
Polar Bear	0	2	1	1	5	9	2
Caribou	1,313	1,508	1,351	1,203	1,175	6,550	1,310
Wolf	62	98	139	147	87	533	107
Arctic Fox	438	493	2,103	460	744	4,238	848
Snow Goose	11	16	3	22	6	58	12
Canada Goose	2,281	2,422	1,609	1,149	1,149	8,610	1,722
Brant + Duck	1,539	1,290	696	524	578	4,627	925
Duck Eggs	1,113	3,582	956	2,081	995	8,727	1,745
*Goose Eggs	---	---	---	277	429	706	353
Murre	775	271	328	214	122	1,710	342
Gulllemot	98	55	18	79	14	264	53
Loon	70	44	74	48	29	265	53
Arctic Hare	145	177	125	77	105	629	126
Grouse/Ptarmigan	17,724	25,822	19,014	16,012	12,708	91,280	18,256
Snowy Owl	3	62	57	7	28	157	31
Arctic Char	9,328	10,050	4,329	3,202	4,676	31,585	6,317
Salmon	8,102	5,159	5,362	5,230	9,862	33,715	6,743
Lake Trout	5,146	3,262	3,512	2,627	2,983	17,530	3,506
Codfish	619	8	42	34	6	709	142
Whitefish	5,333	2,250	2,030	1,661	2,343	13,617	2,723
Brook Trout	7,606	6,946	5,917	6,342	6,704	33,515	6,703
Sculpin	4,871	3,348	1,415	1,420	1,551	12,605	2,521
Land-locked Char	198	134	55	82	87	556	111

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: KANGIQSUALUJUAQ

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	1,446	772	374	363	502	3,457	691
Bearded Seal	127	62	35	93	91	408	82
Harp Seal	34	20	1	0	6	61	12
Ranger Seal	6	2	5	1	31	45	9
Beluga Whale	20	15	10	37	14	96	19
Walrus	1	0	0	1	0	2	.2
Polar Bear	12	7	3	0	5	27	5
Caribou	1,204	887	921	1,193	849	5,054	1,011
Wolf	53	67	93	76	84	373	75
Arctic Fox	340	156	1,017	373	560	2,446	489
Snow Goose	8	1	4	0	16	29	6
Canada Goose	624	467	537	421	568	2,617	523
Brant + Duck	1,180	422	567	671	391	3,231	646
Duck Eggs	4,729	2,553	2,105	2,535	890	12,812	2,562
*Goose Eggs	---	---	---	232	110	342	171
Murre	221	159	103	76	48	607	121
Guillemot	288	125	59	125	41	638	128
Loon	100	87	42	83	25	337	67
Arctic Hare	74	56	40	66	53	289	58
Grouse/Ptarmigan	6,180	8,947	7,936	6,168	5,516	34,747	6,949
Snowy Owl	15	4	50	6	11	86	17
Arctic Char	28,972	20,896	17,509	16,461	11,231	95,069	19,014
Salmon	761	919	699	604	175	3,158	632
Lake Trout	1,481	1,251	815	748	973	5,268	1,054
Codfish	152	103	25	32	12	324	65
Whitefish	1,294	185	589	51	226	2,345	469
Brook Trout	4,753	2,928	2,277	4,622	2,060	16,640	3,328
Sculpin	1,015	660	491	1,134	1,524	4,824	965
Land-locked Char	446	172	85	60	88	851	170

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

COMMUNITY: KILLINIQ*

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	652	530	---	---	---	1,182	591
Bearded Seal	70	40	---	---	---	110	55
Harp Seal	100	178	---	---	---	278	139
Ranger Seal	6	2	---	---	---	8	4
Beluga Whale	9	16	---	---	---	25	13
Walrus	0	2	---	---	---	2	1
Polar Bear	8	6	---	---	---	14	7
Caribou	80	22	---	---	---	102	51
Wolf	0	0	---	---	---	0	0
Arctic Fox	47	6	---	---	---	53	27
Snow Goose	1	0	---	---	---	1	1
Canada Goose	106	106	---	---	---	212	106
Brant + Duck	379	240	---	---	---	619	310
Duck Eggs	335	420	---	---	---	755	378
Goose Eggs	---	---	---	---	---	---	---
Murre	86	82	---	---	---	168	84
Gulllemot	118	12	---	---	---	130	65
Loon	19	28	---	---	---	47	24
Arctic Hare	4	10	---	---	---	14	7
Grouse/Ptarmigan	843	1,816	---	---	---	2,659	1,330
Snowy Owl	0	2	---	---	---	2	1
Arctic Char	217	366	---	---	---	583	292
Salmon	113	196	---	---	---	309	155
Lake Trout	0	2	---	---	---	2	1
Codfish	1,270	0	---	---	---	1,270	635
Whitefish	0	0	---	---	---	0	0
Brook Trout	0	0	---	---	---	0	0
Sculpin	19	18	---	---	---	37	19
Land-Locked Char	11	92	---	---	---	103	52

* 2 year average

--- No data available

TOTAL HARVEST (1976-1980)

ALL SPECIES

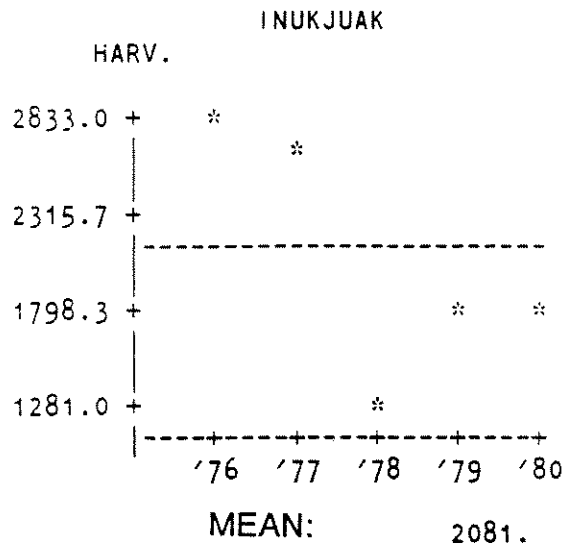
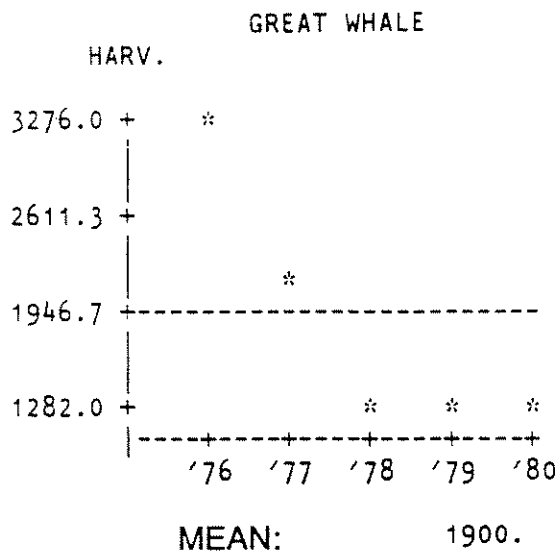
COMMUNITY: CHISASIBI*

SPECIES	1976	1977	1978	1979	1980	Total harvest	5-year Average
Ringed Seal	2	---	20	21	---	43	14
Bearded Seal	0	---	2	0	---	2	1
Harp Seal	0	---	0	0	---	0	0
Ranger Seal	0	---	0	0	---	0	0
Beluga whale	0	---	0	0	---	0	0
Walrus	0	---	0	0	---	0	0
Polar Bear	0	---	0	0	---	0	0
Caribou	0	---	0	0	---	0	0
wolf	0	---	0	0	---	0	0
Arctic Fox	2	---	2	1	---	5	2
Snow Goose	15	---	25	44	---	84	28
Canada Goose	312	---	638	551	---	1,501	500
Brant + Duck	67	---	261	292	---	620	207
Duck Eggs	36	---	74	19	---	129	43
Goose Eggs	---	---	---	0	---	0	0
Murre	0	---	45	0	---	45	15
Gulliemot	19	---	4	0	---	23	8
Loon	12	---	83	9	---	104	35
Arctic Hare	16	---	279	192	---	487	162
Grouse/Ptarmigan	175	---	1,658	572	---	2,405	802
Snowy Owl	0	---	11	8	---	19	6
Arctic Char	32	---	14	0	---	46	15
Salmon	0	---	0	0	---	0	0
Lake Trout	132	---	20	144	---	296	99
Codfish	200	---	86	27	---	313	104
Whitefish	1,156	---	1,654	464	---	3,274	1,091
Brook Trout	40	---	324	217	---	581	194
Sculpin	200	---	47	0	---	247	82
Land-locked Char	0	---	0	0	---	0	0

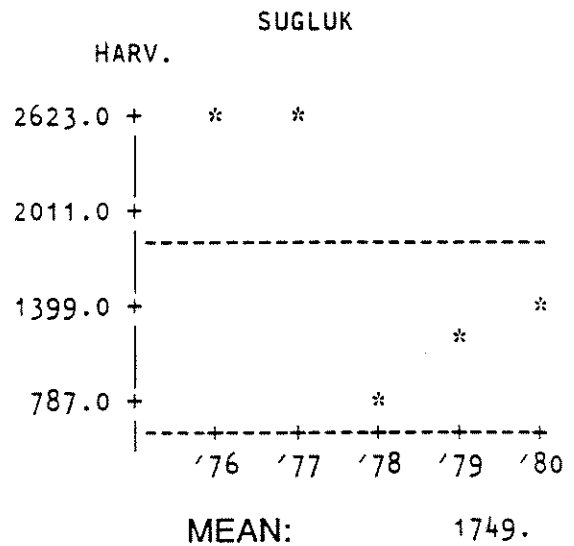
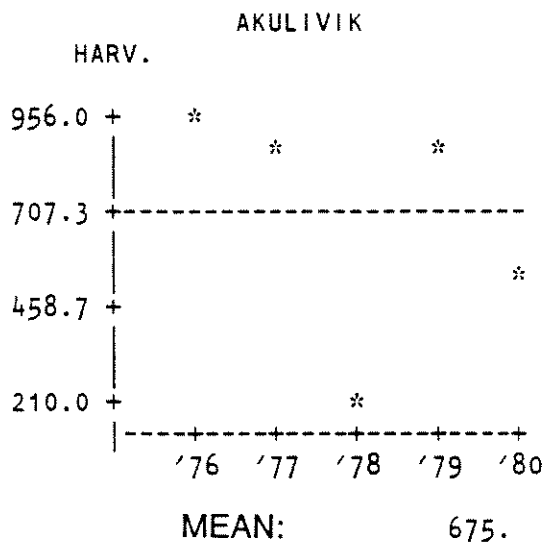
* 3 year average

--- No data available

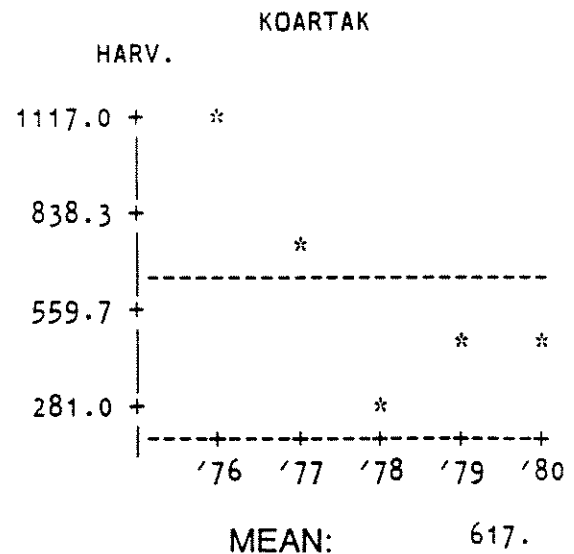
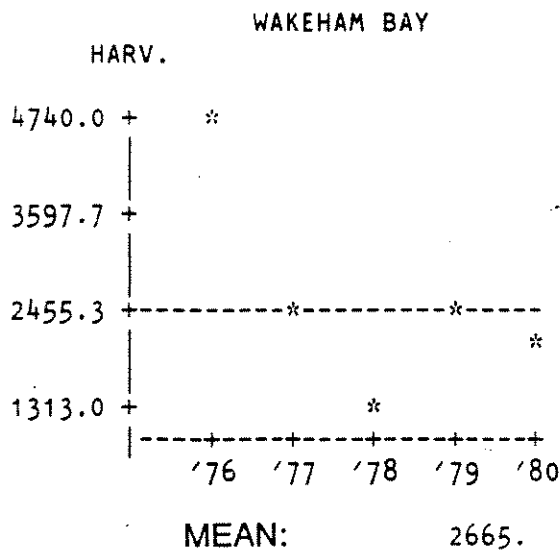
RINGED SEAL



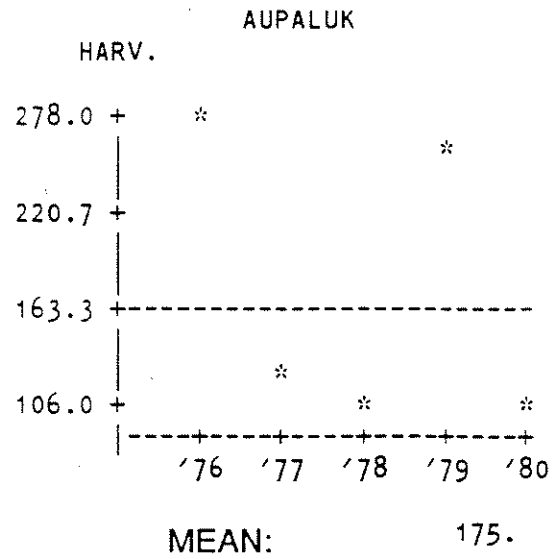
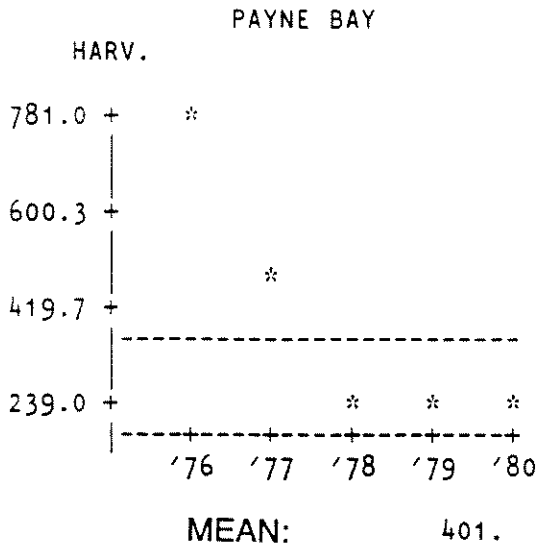
RINGED SEAL



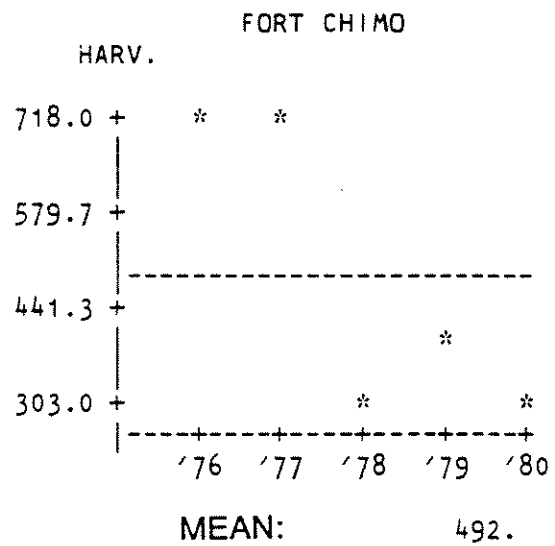
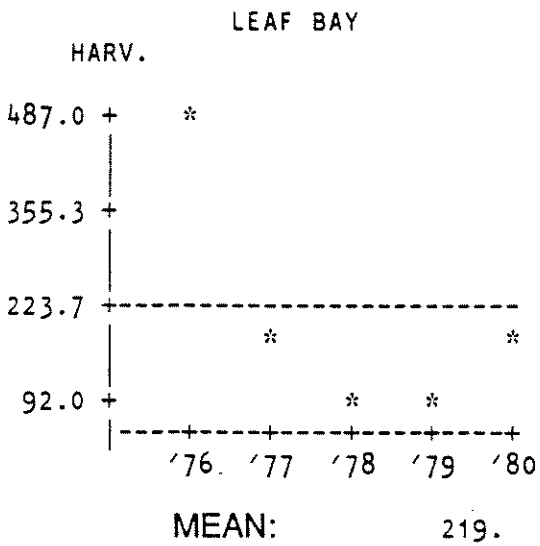
RINGED SEAL



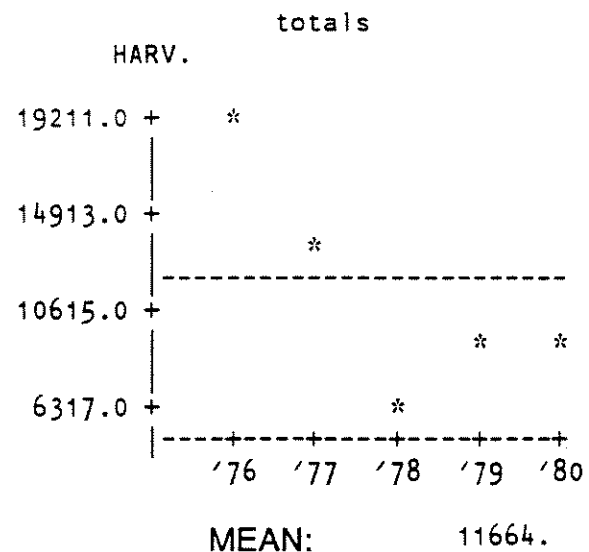
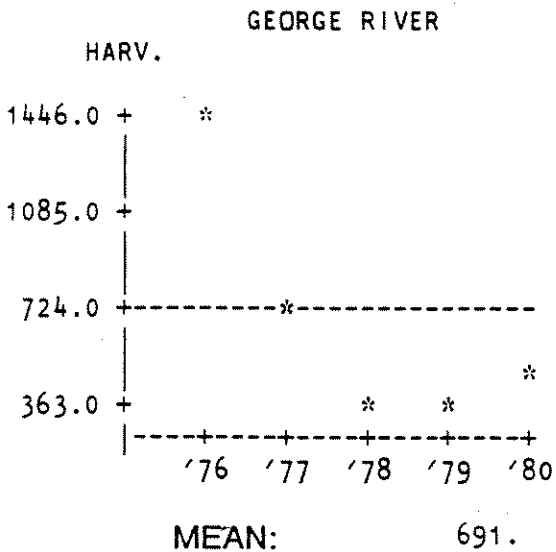
RINGED SEAL



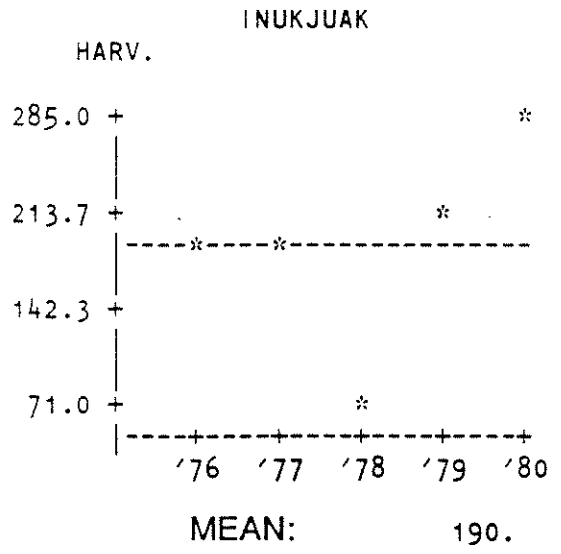
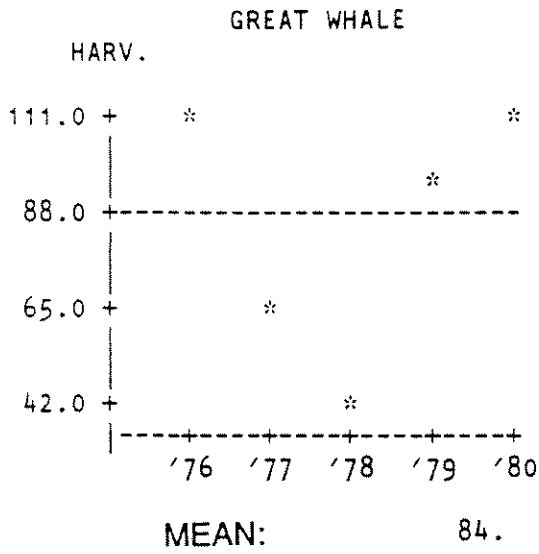
RINGED SEAL



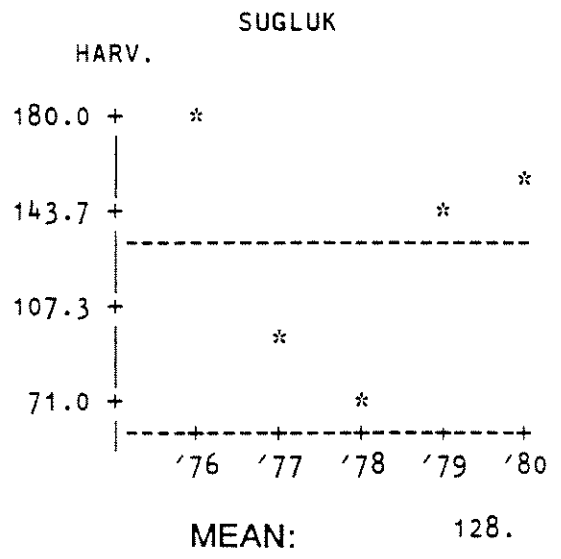
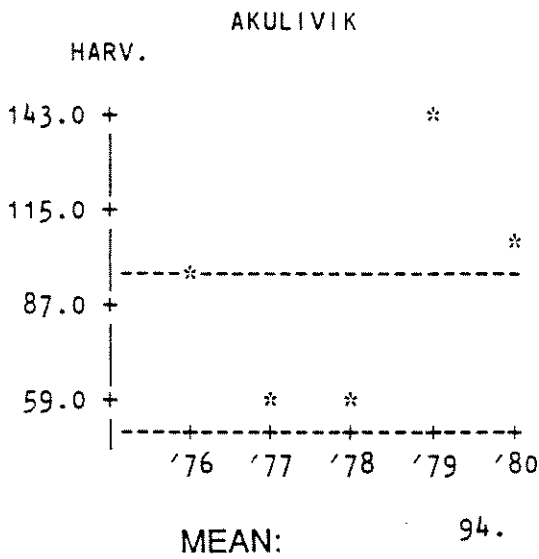
RINGED SEAL



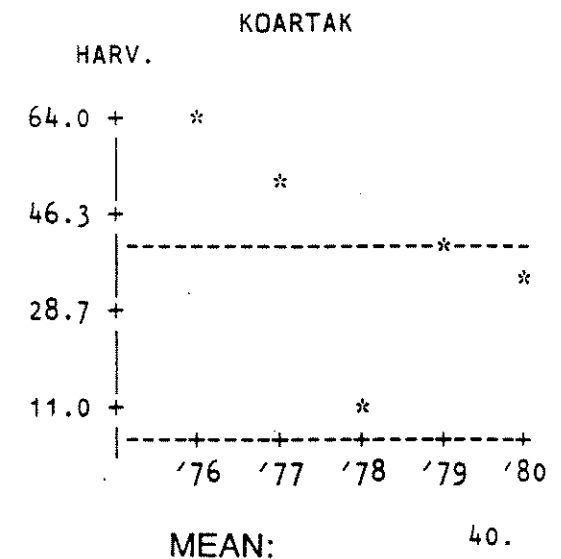
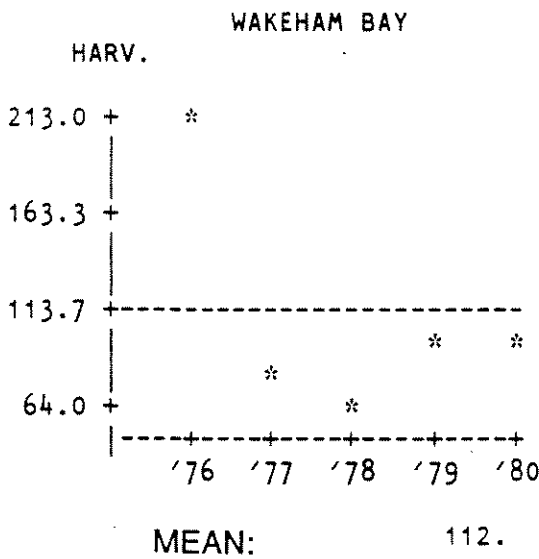
BEARDED SEAL



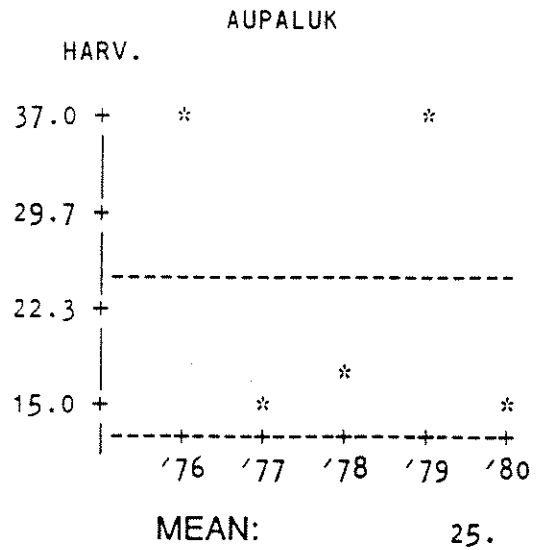
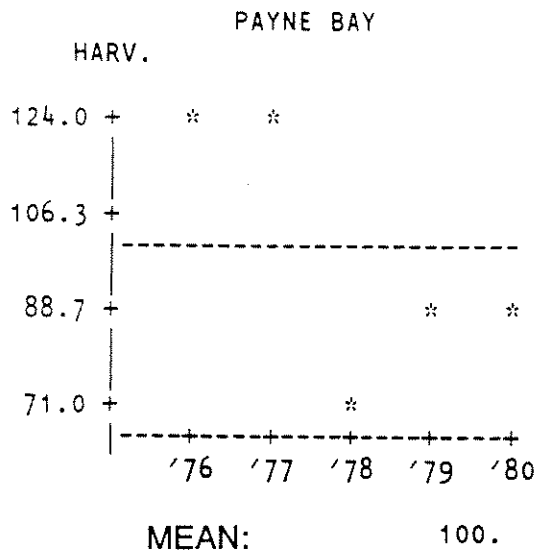
BEARDED SEAL



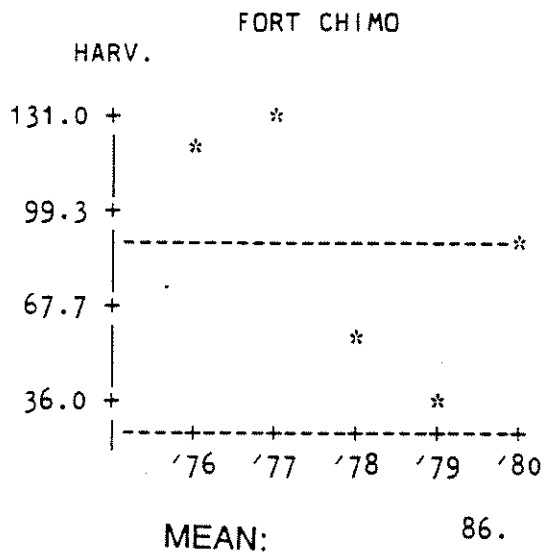
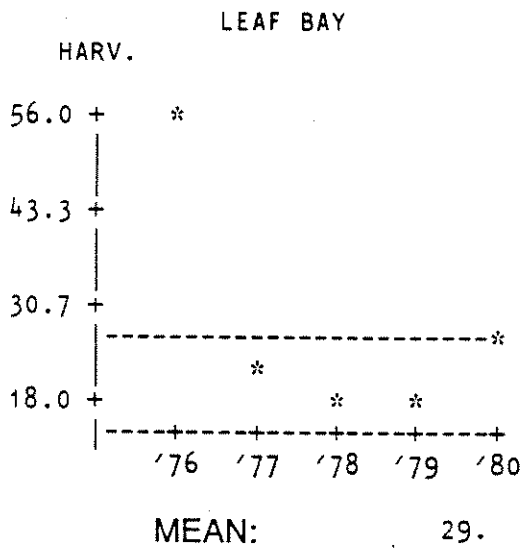
BEARDED SEAL



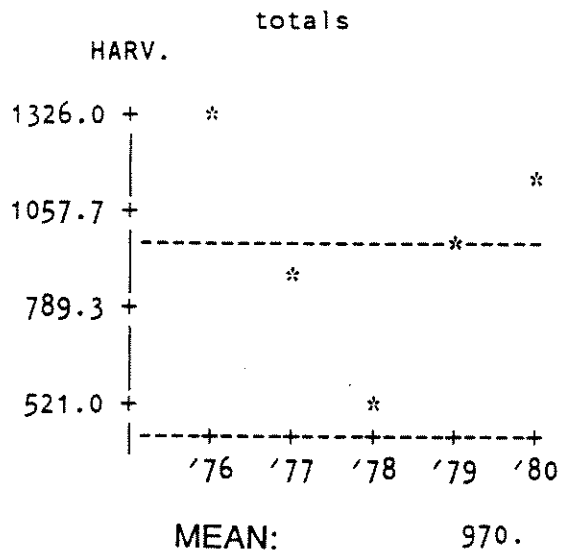
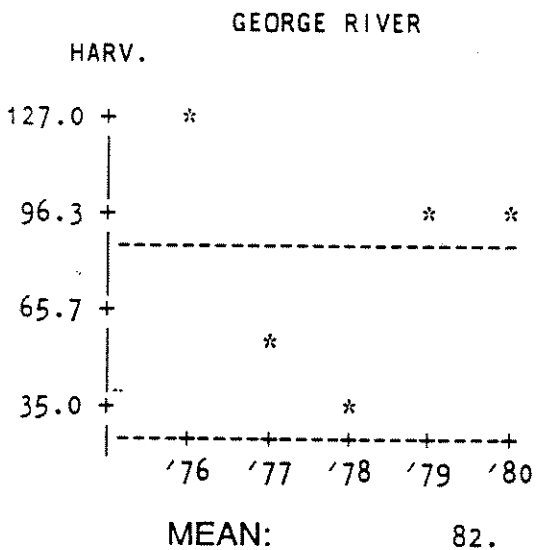
BEARDED SEAL



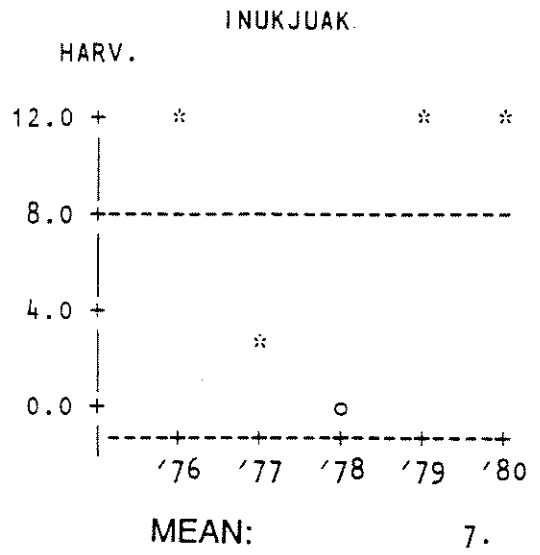
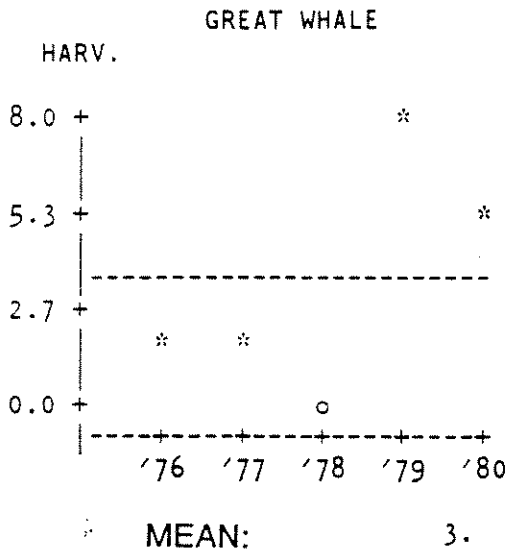
BEARDED SEAL



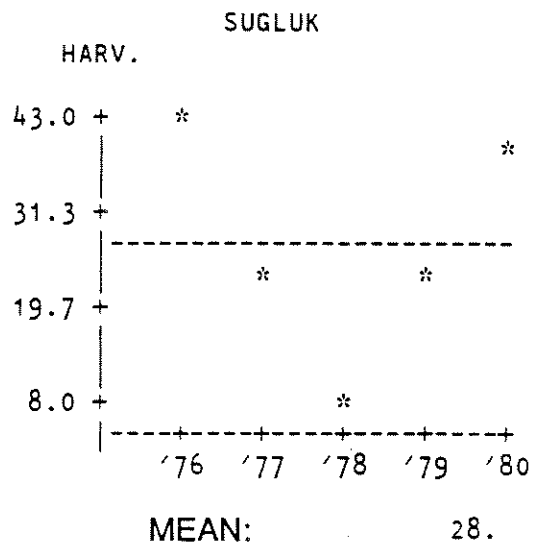
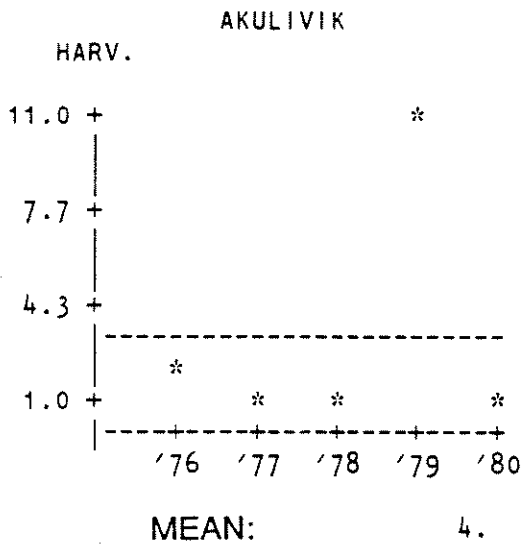
BEARDED SEAL



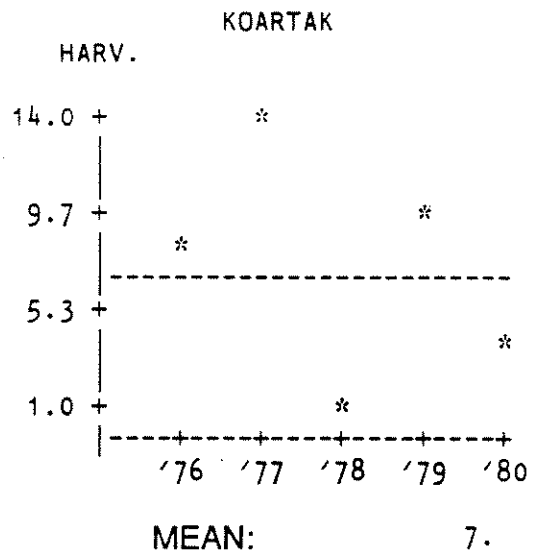
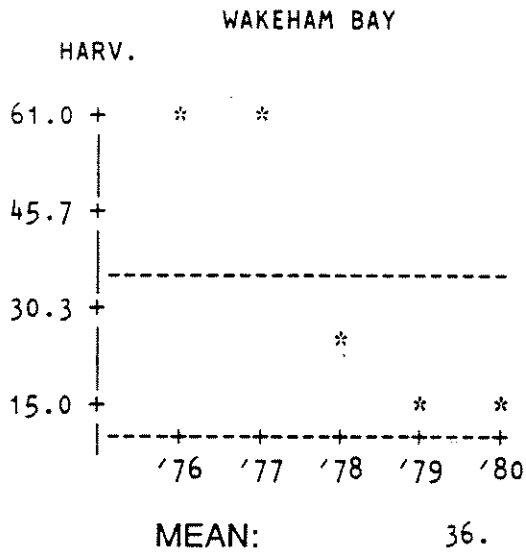
HARP SEAL



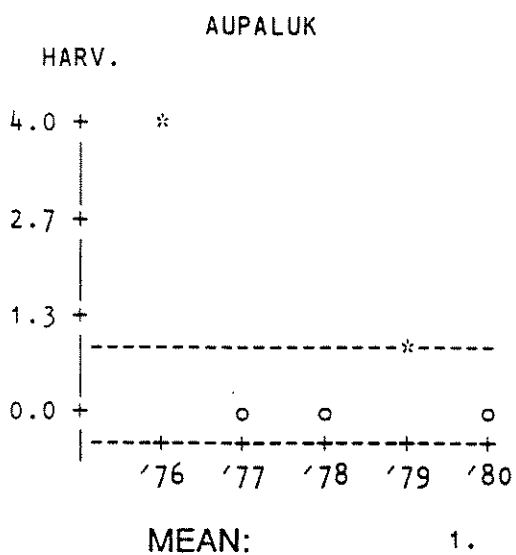
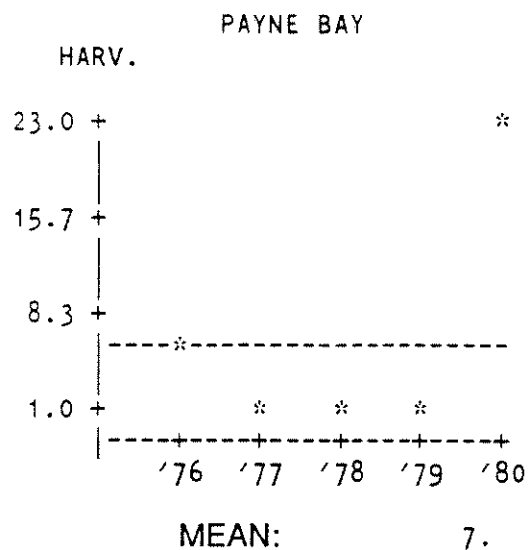
HARP SEAL



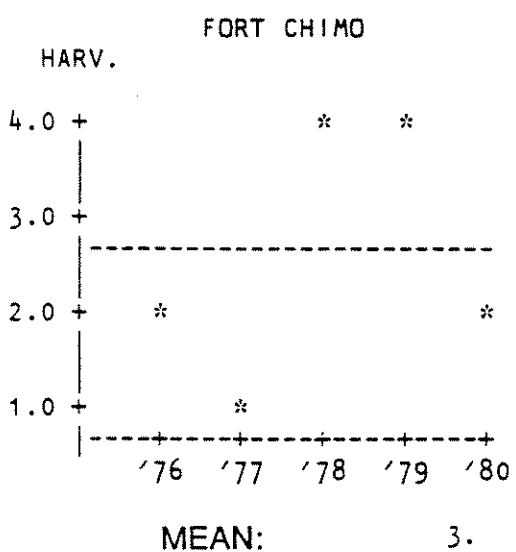
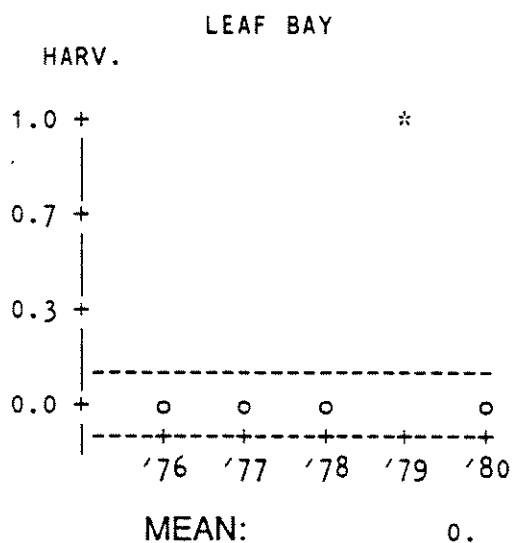
HARP SEAL



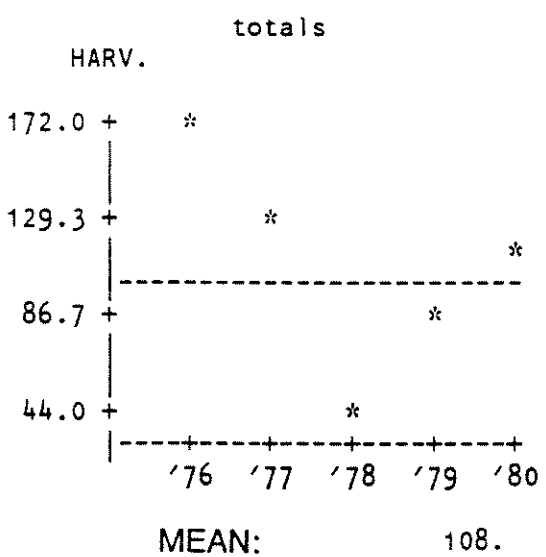
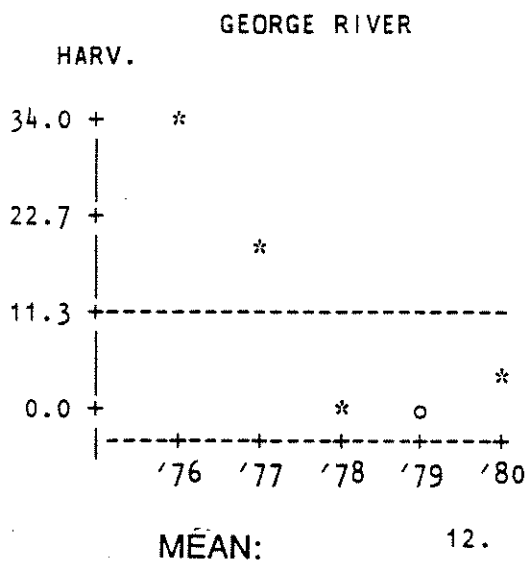
HARP SEAL



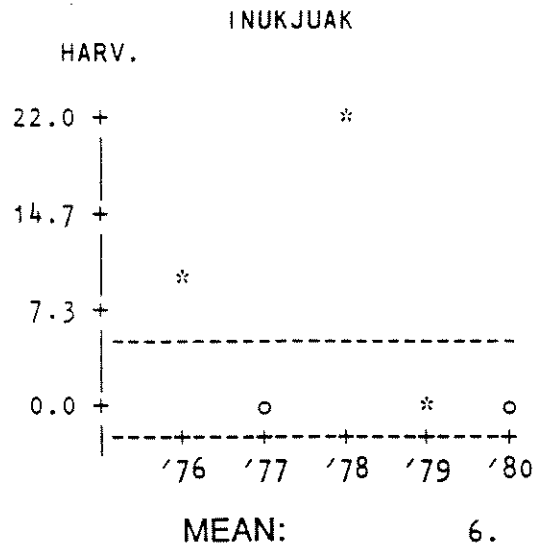
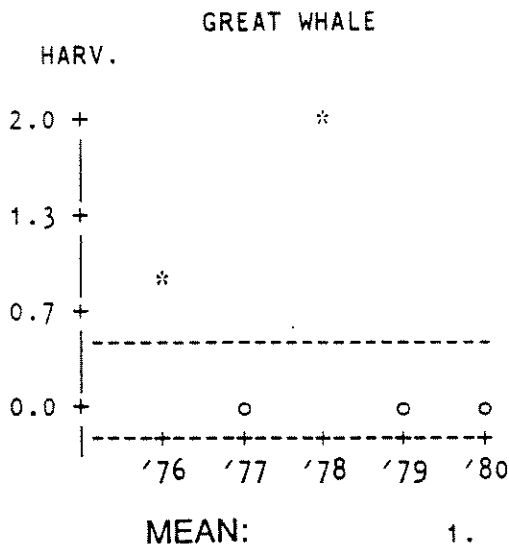
HARP SEAL



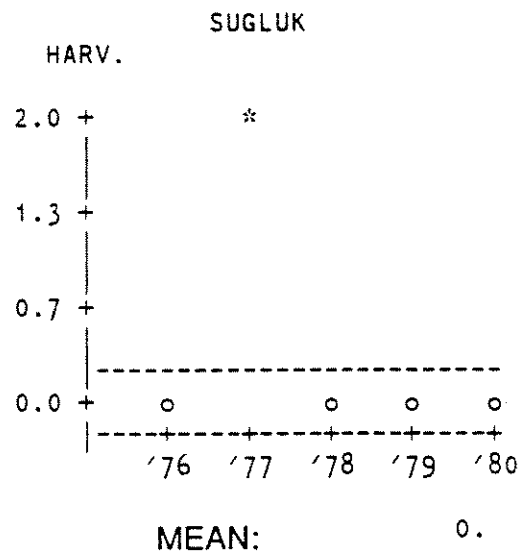
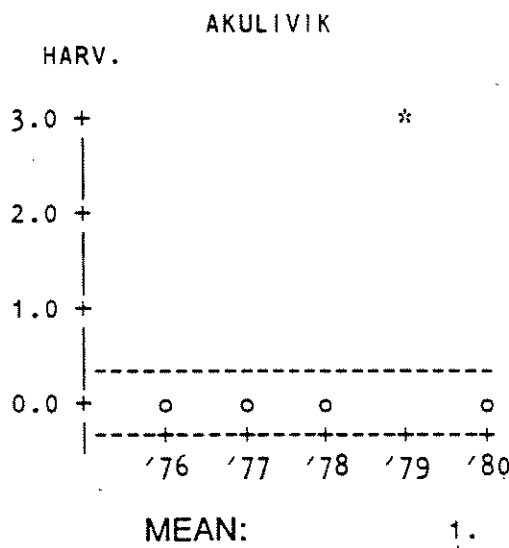
HARP SEAL



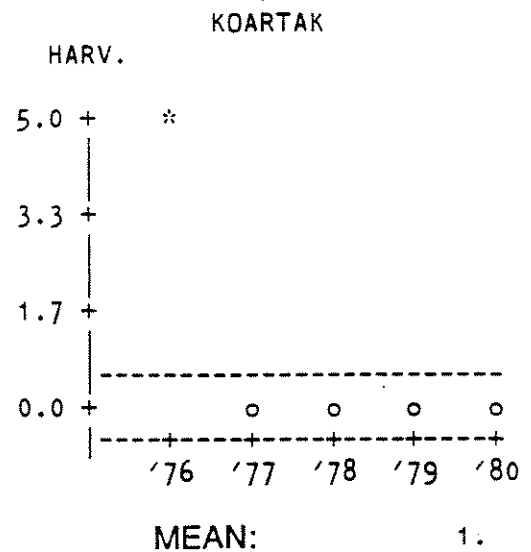
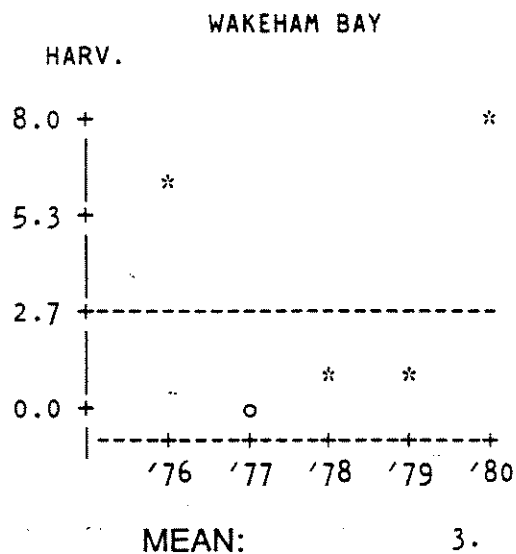
RANGER SEAL



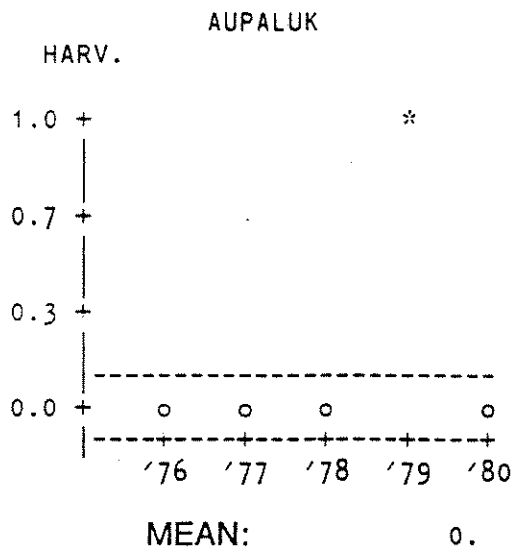
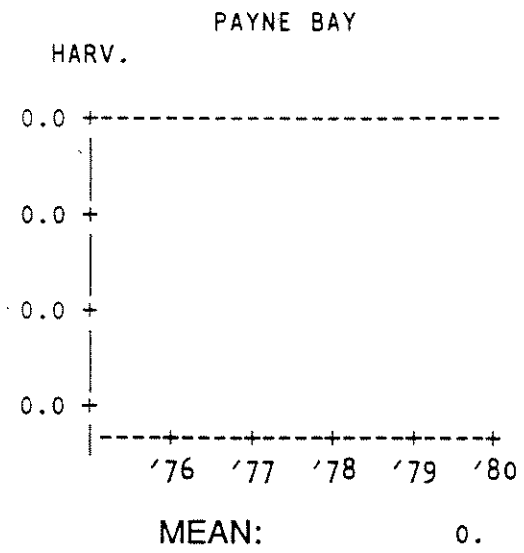
RANGER SEAL



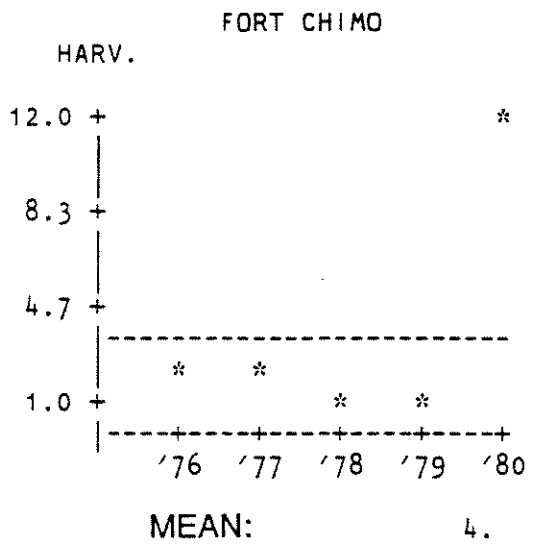
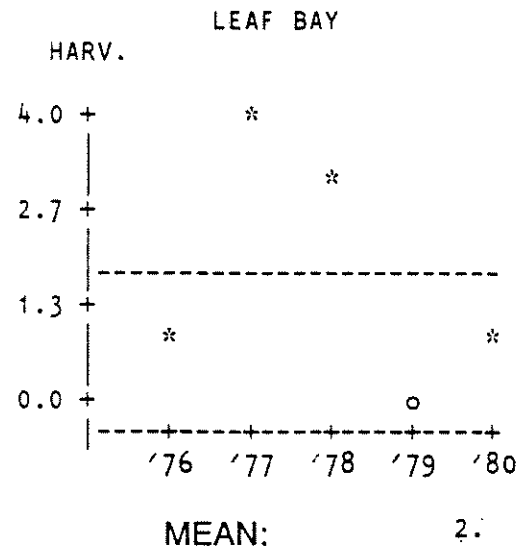
RANGER SEAL



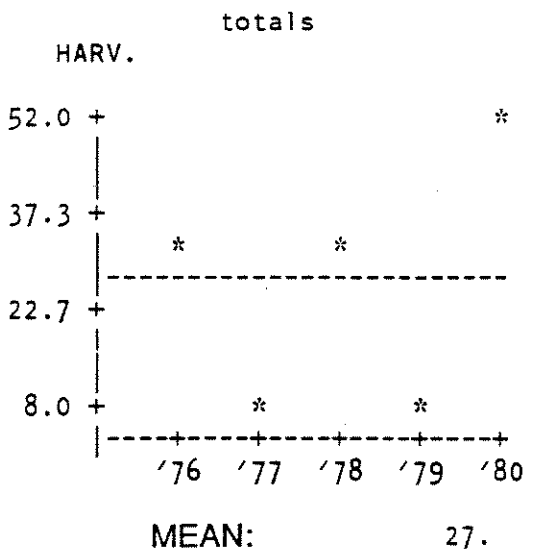
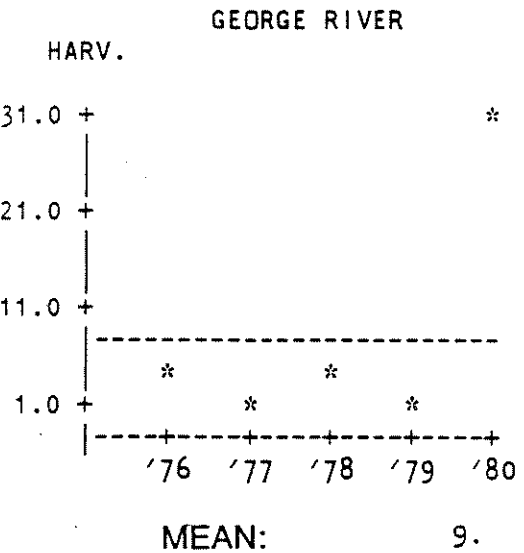
RANGER SEAL



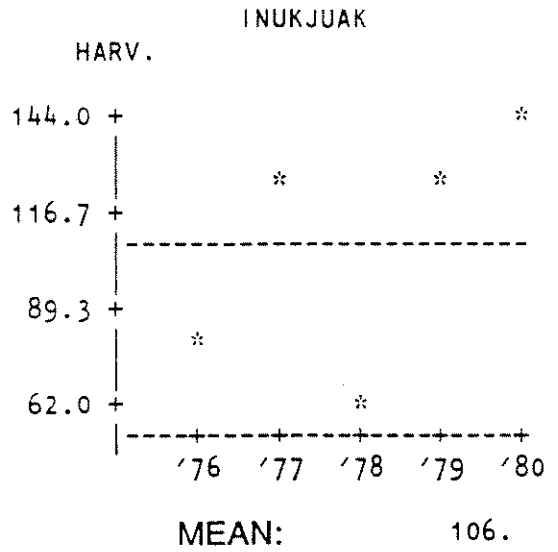
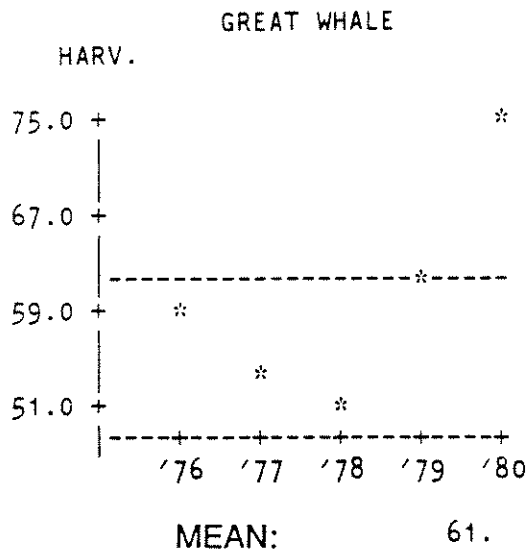
RANGER SEAL



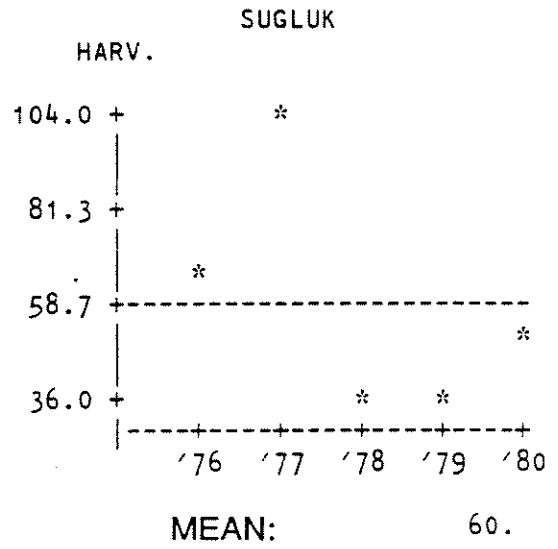
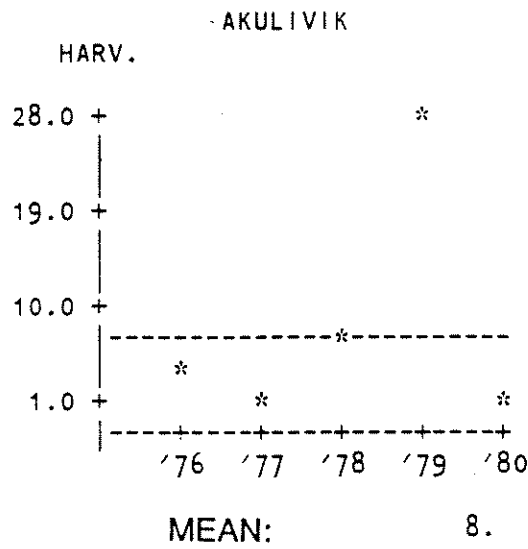
RANGER SEAL



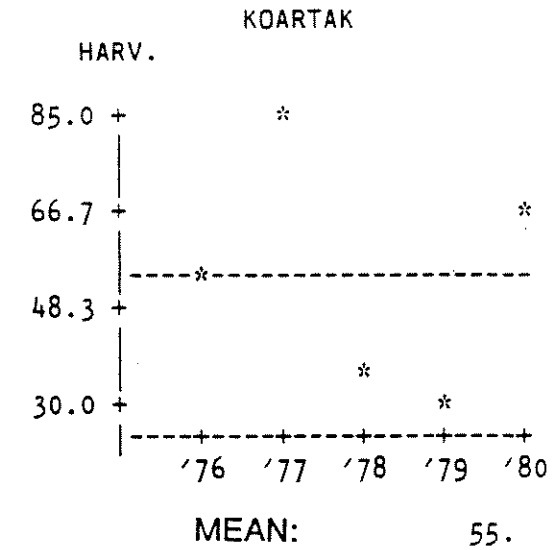
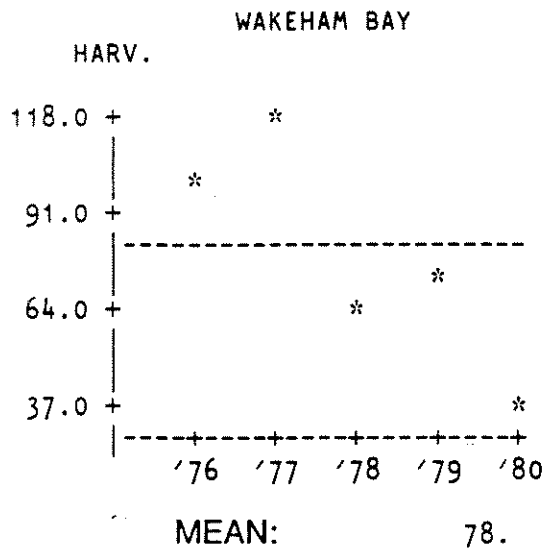
BELUGA WHALE



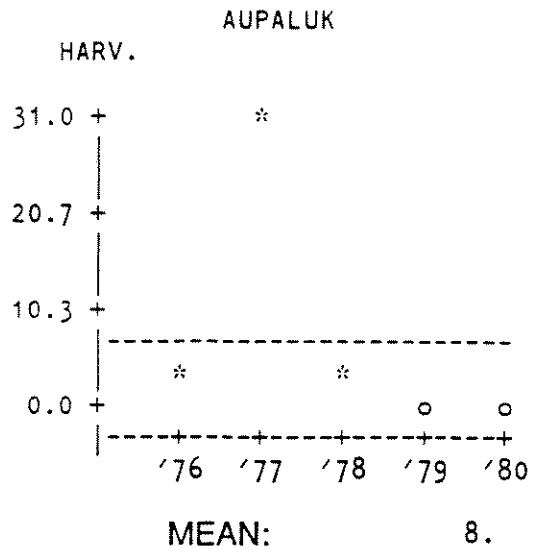
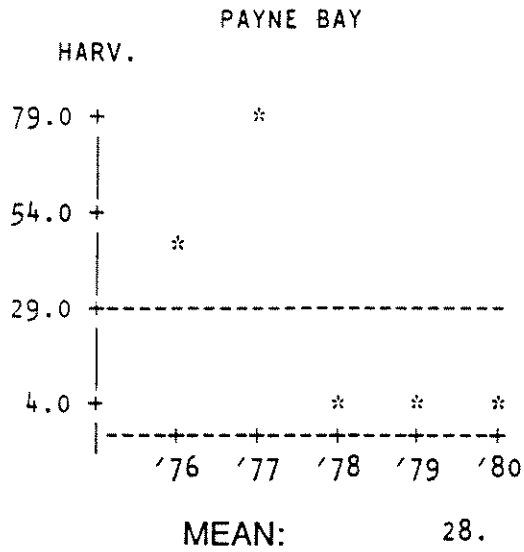
BELUGA WHALE



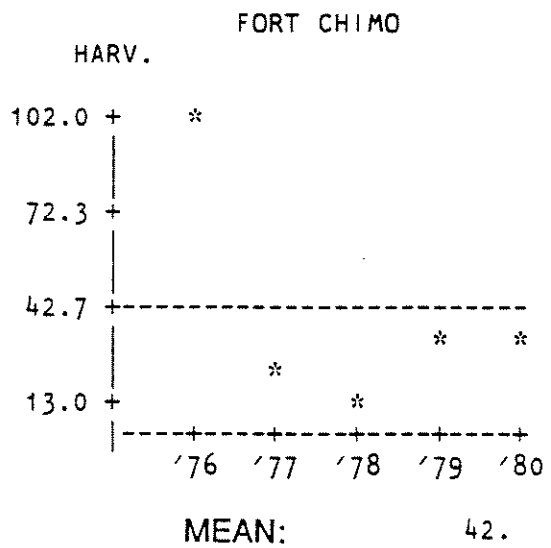
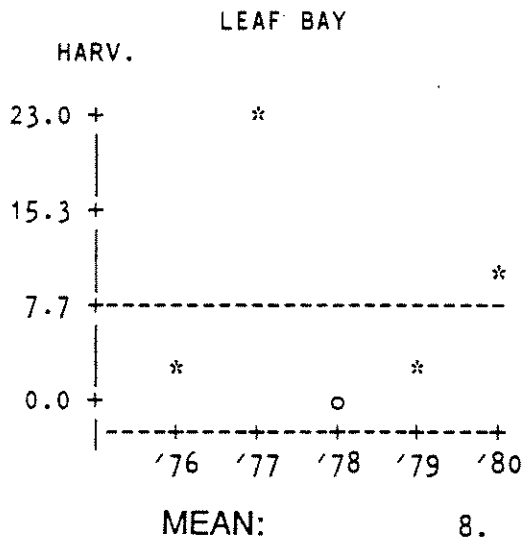
BELUGA WHALE



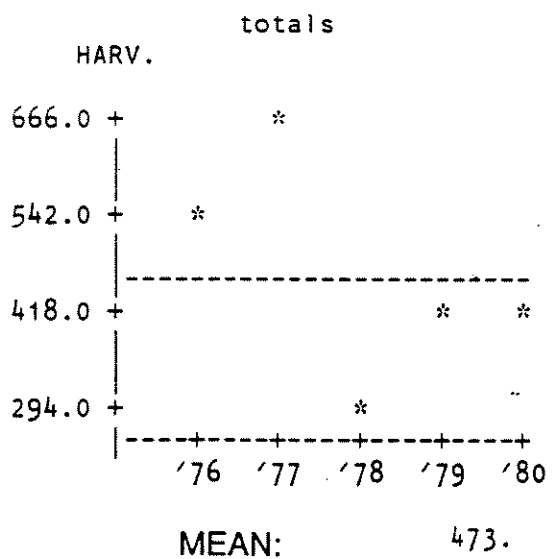
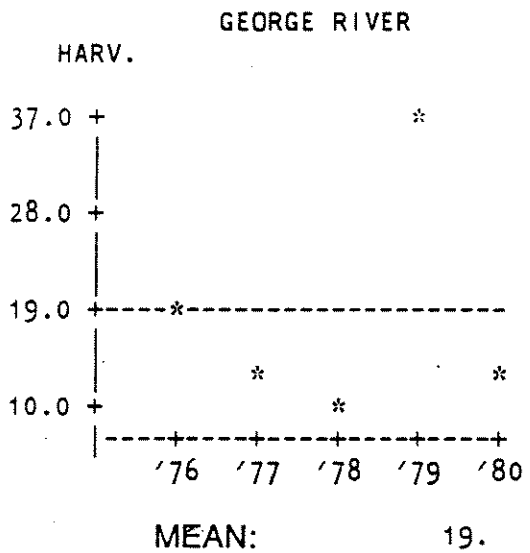
BELUGA WHALE



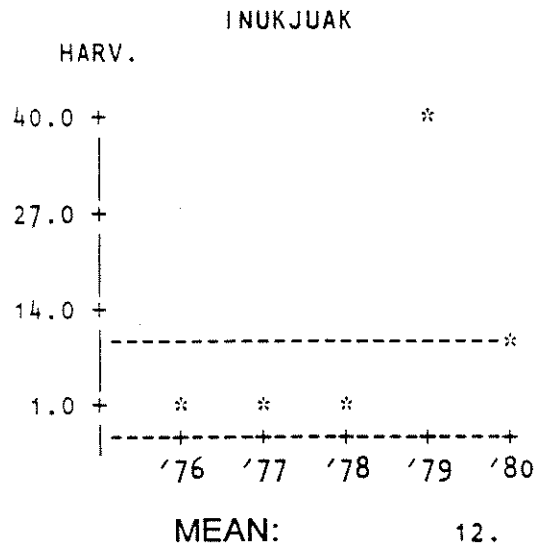
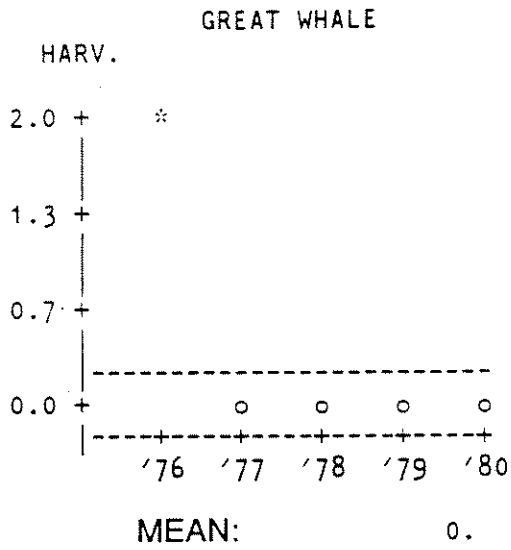
BELUGA WHALE



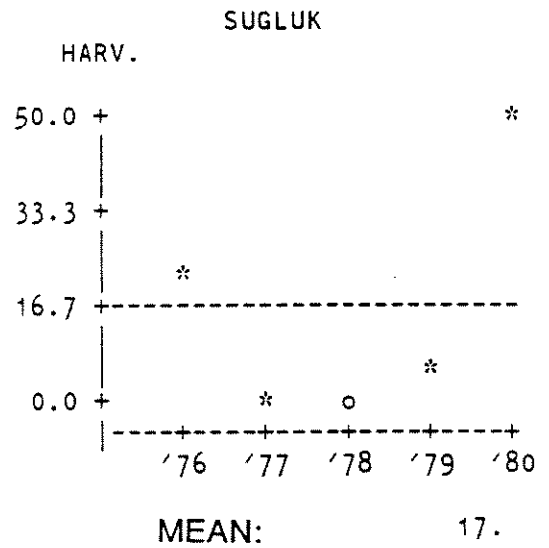
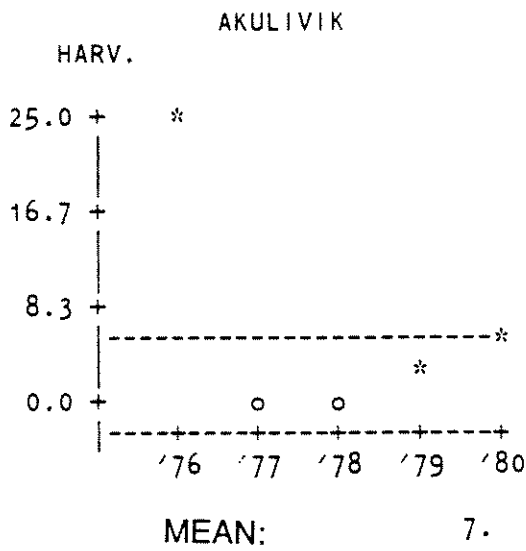
BELUGA WHALE



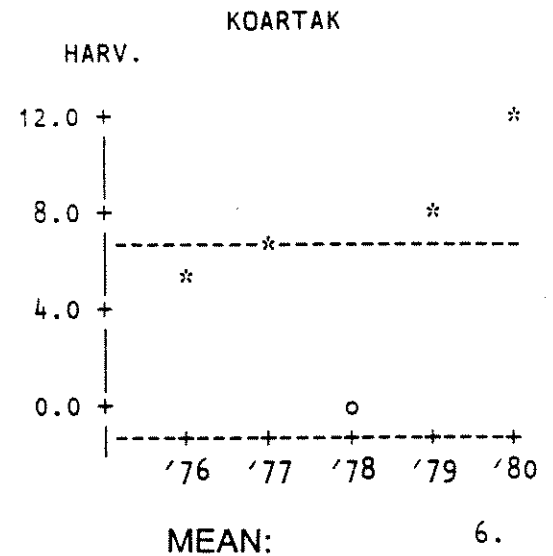
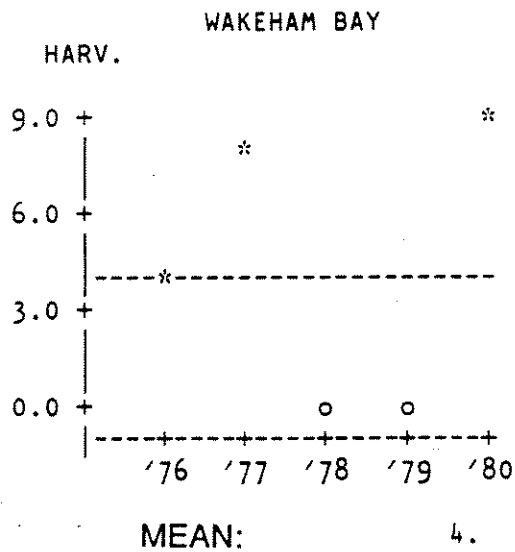
WALRUS



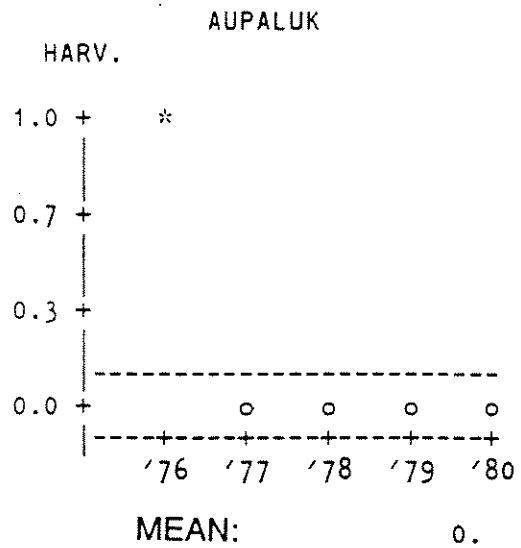
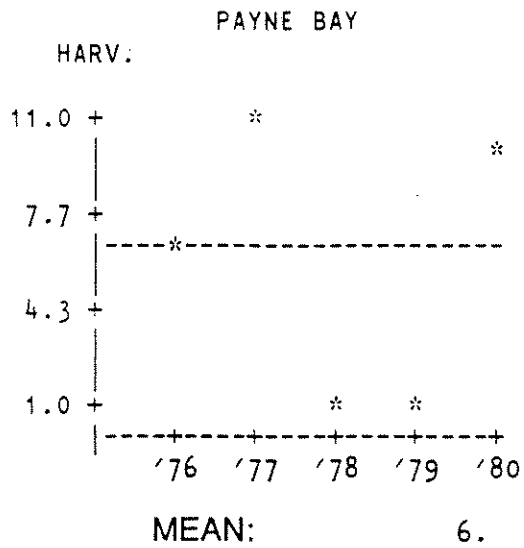
WALRUS



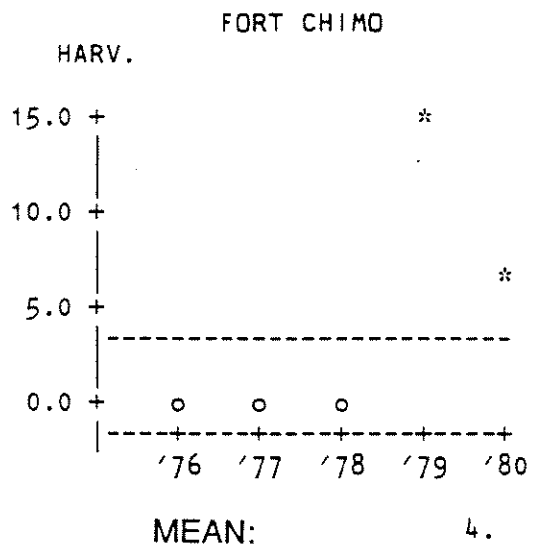
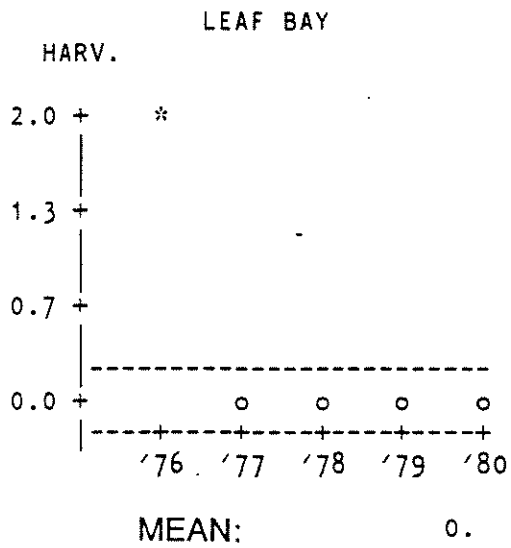
WALRUS



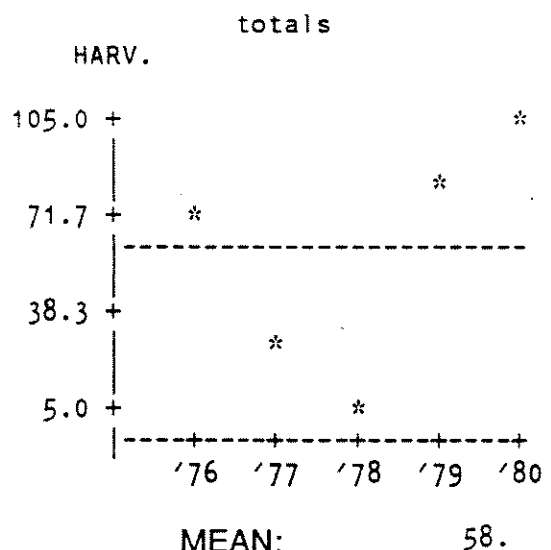
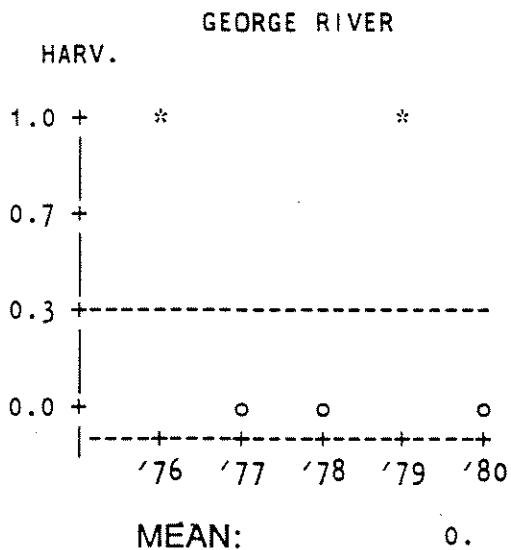
WALRUS



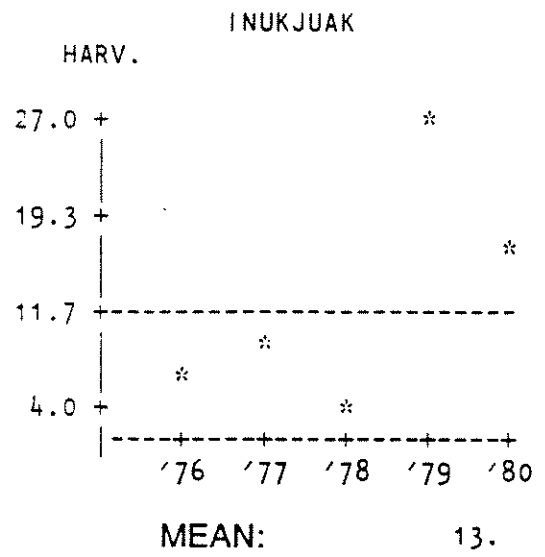
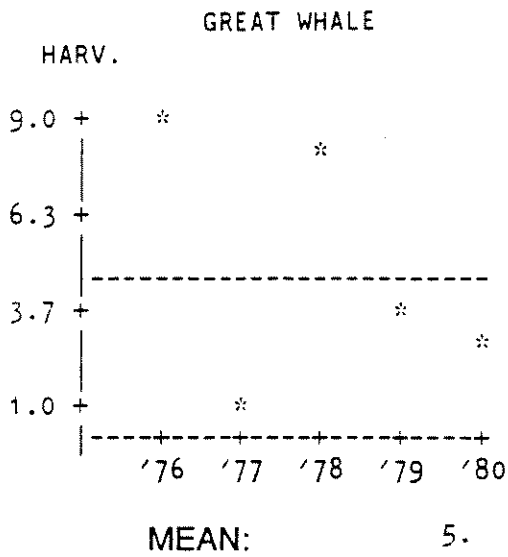
WALRUS



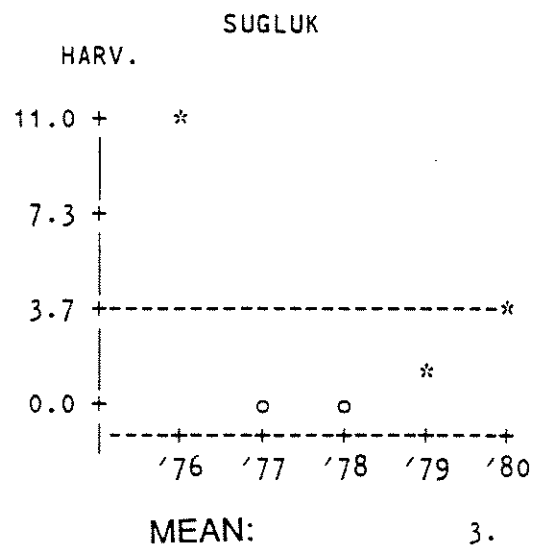
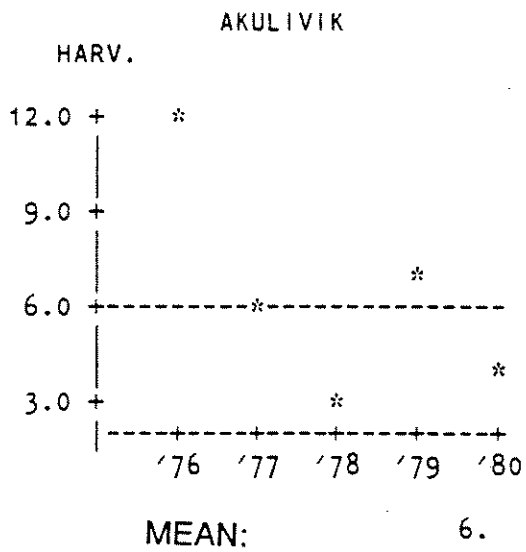
WALRUS



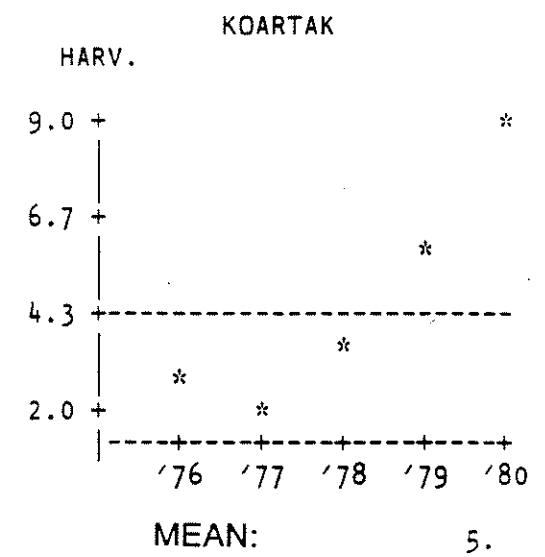
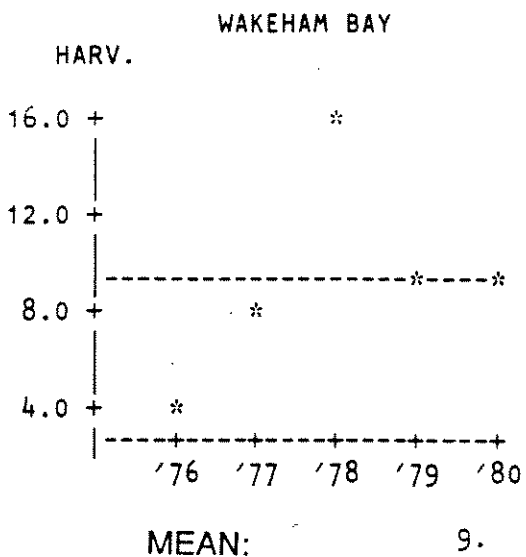
POLAR BEAR



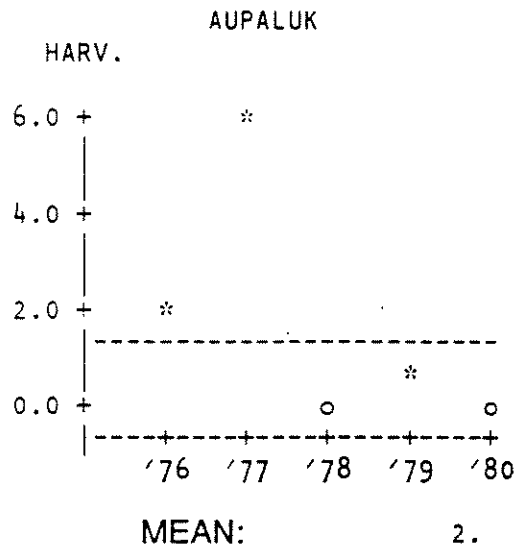
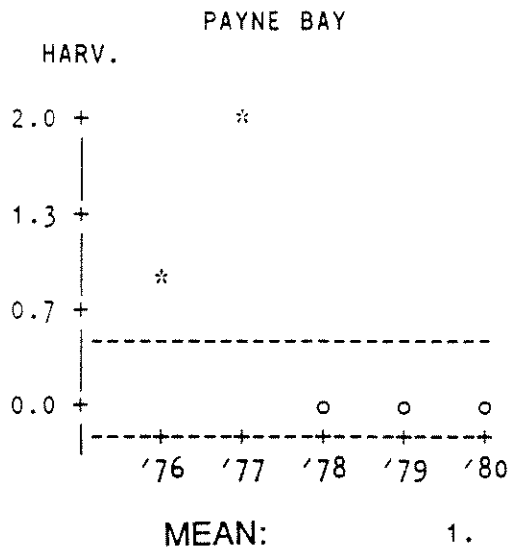
POLAR BEAR



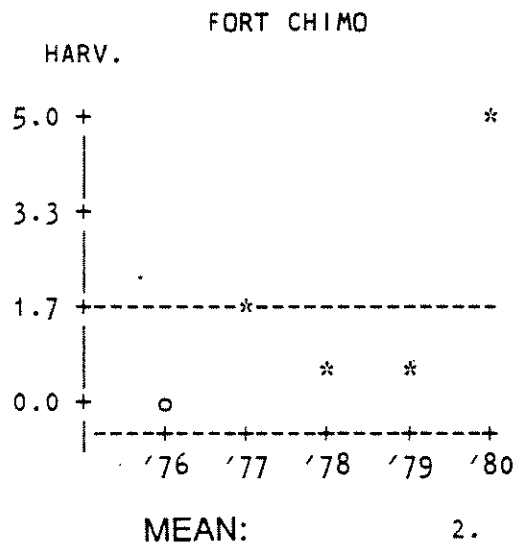
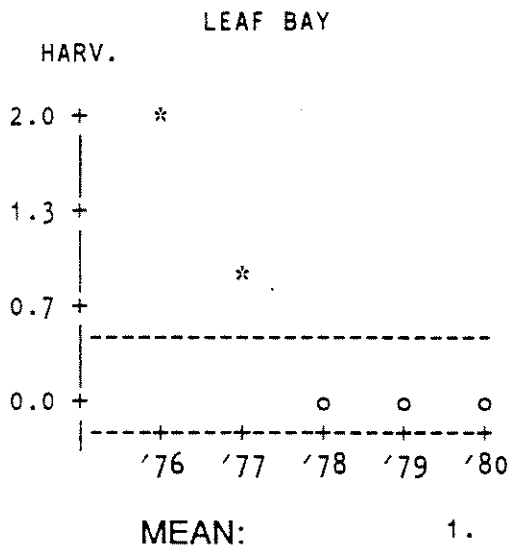
POLAR BEAR



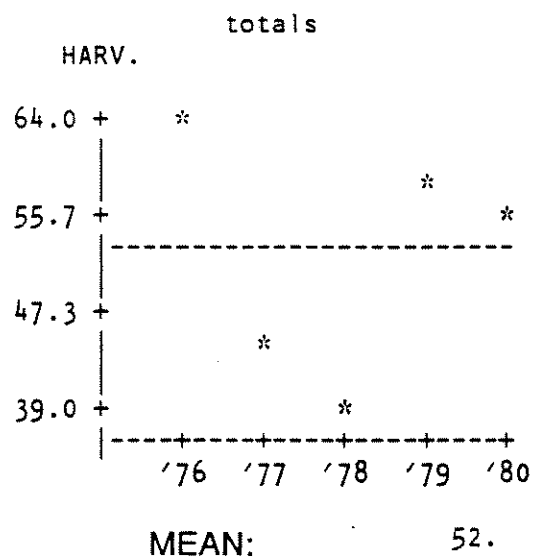
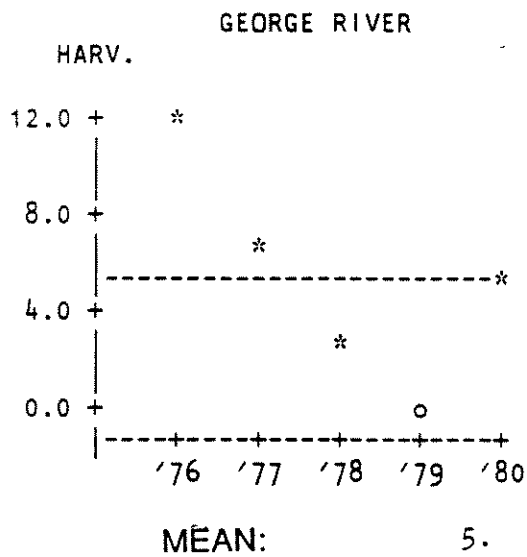
POLAR BEAR



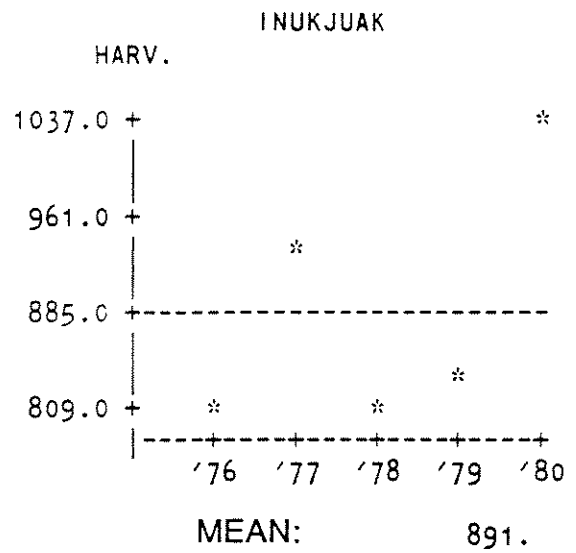
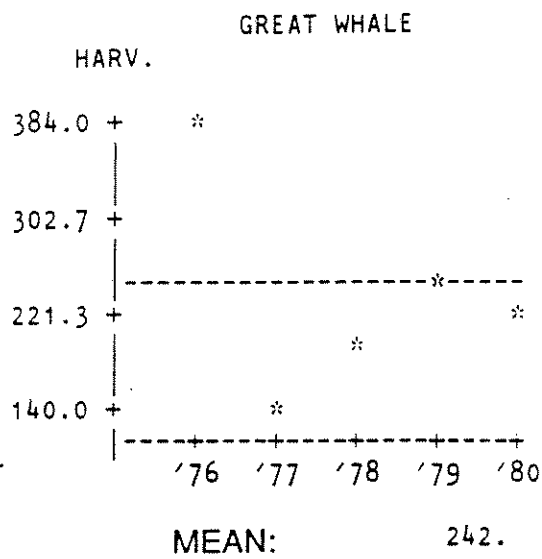
POLAR BEAR



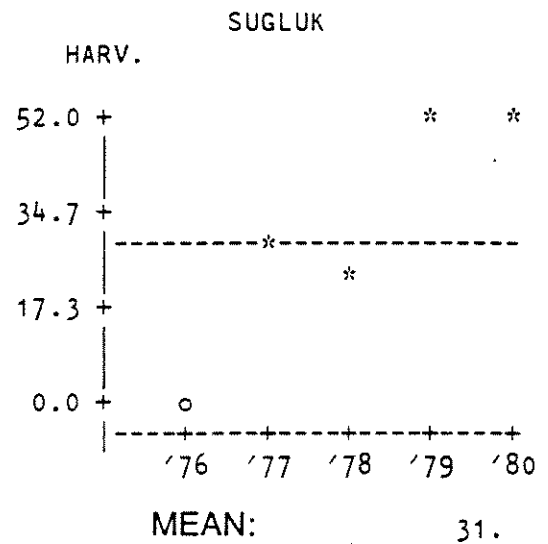
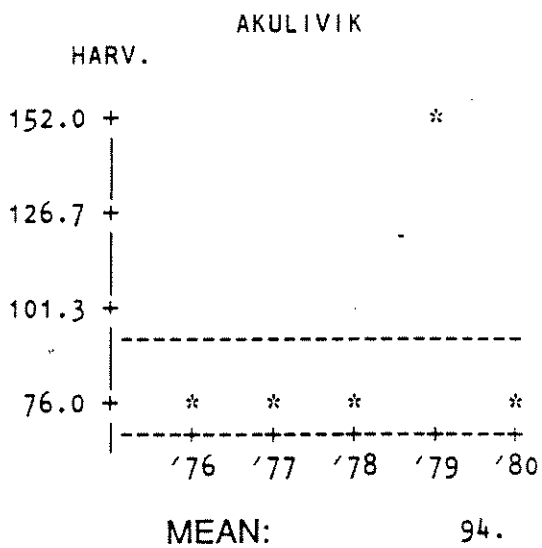
POLAR BEAR



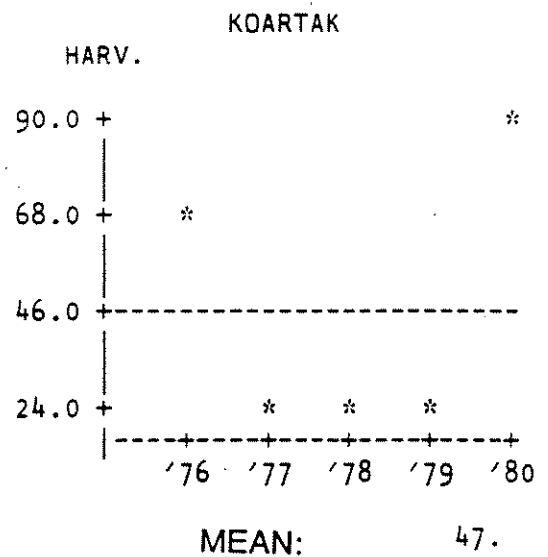
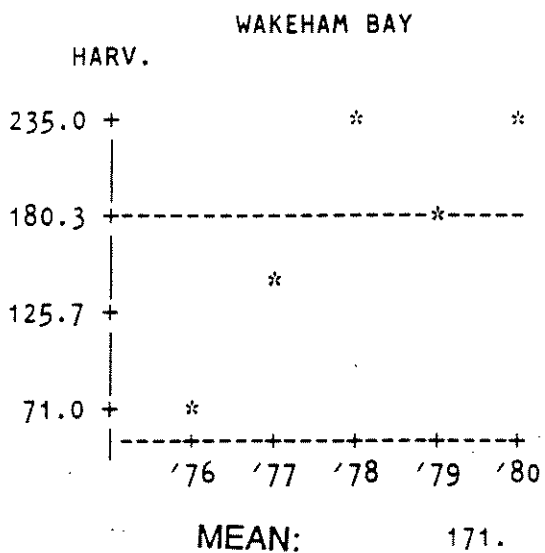
CARIBOU



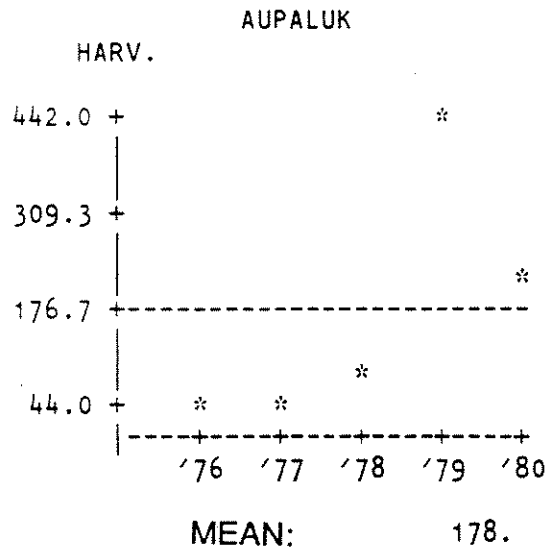
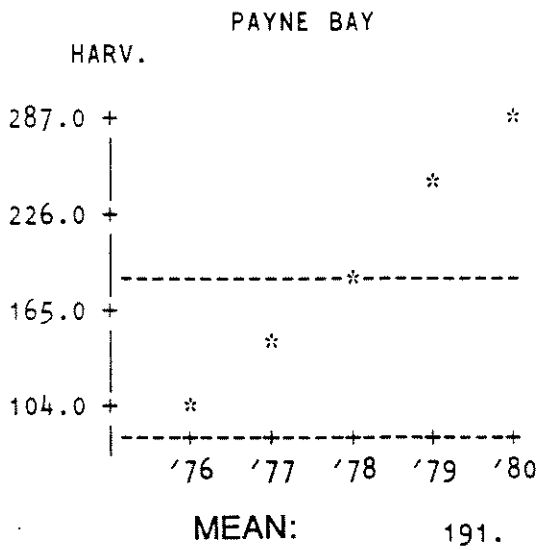
CARIBOU



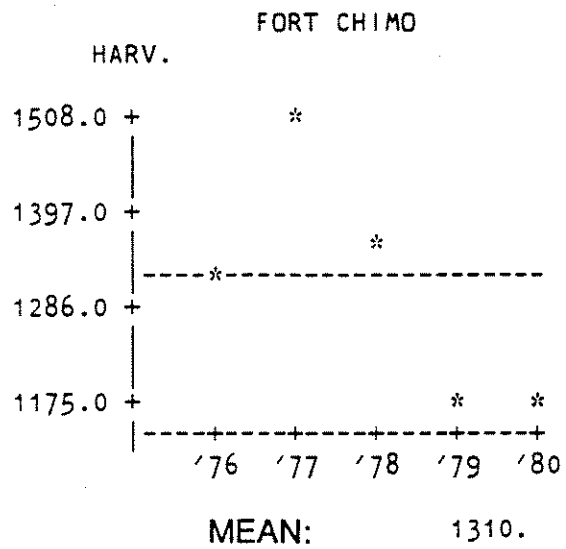
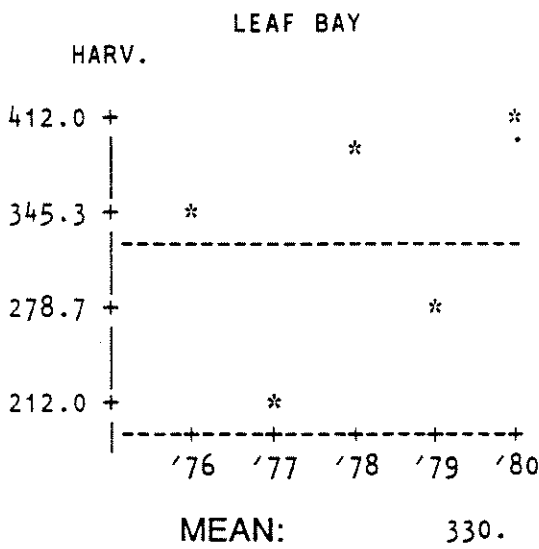
CARIBOU



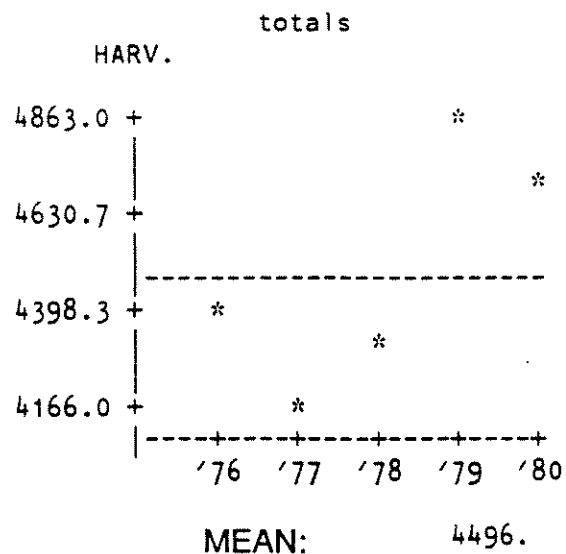
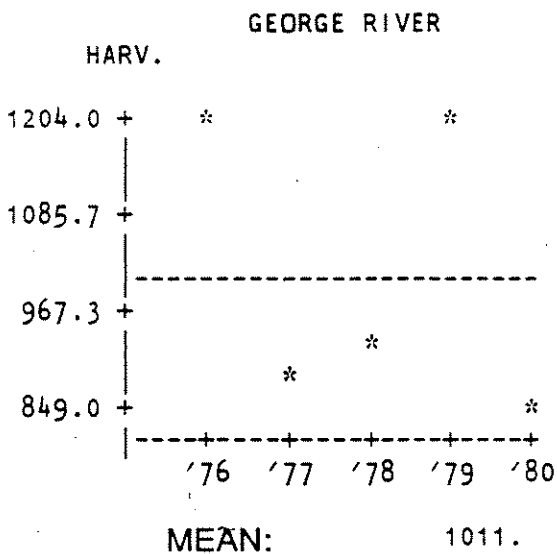
CARIBOU



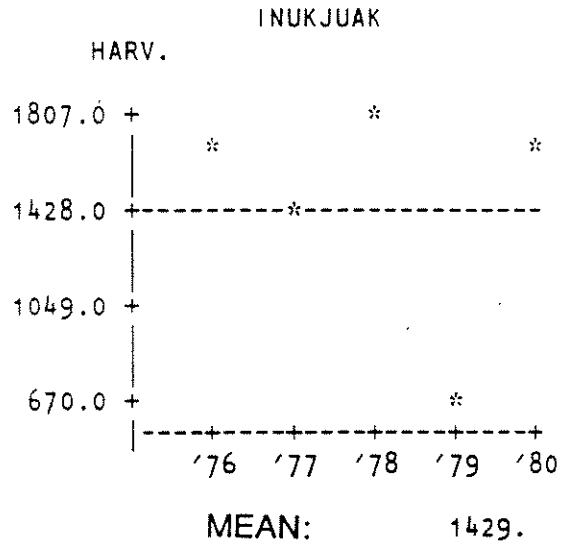
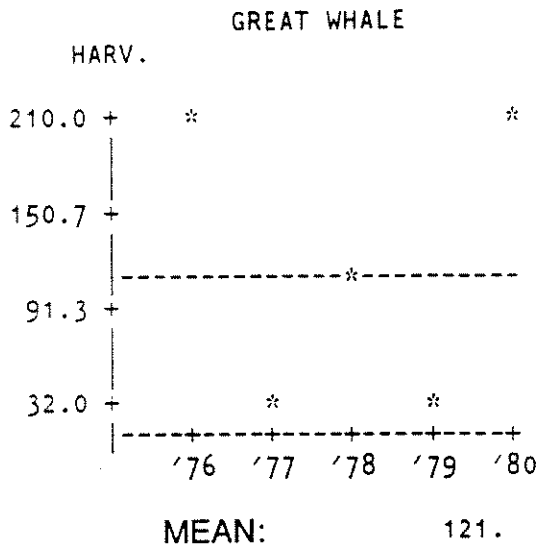
CARIBOU



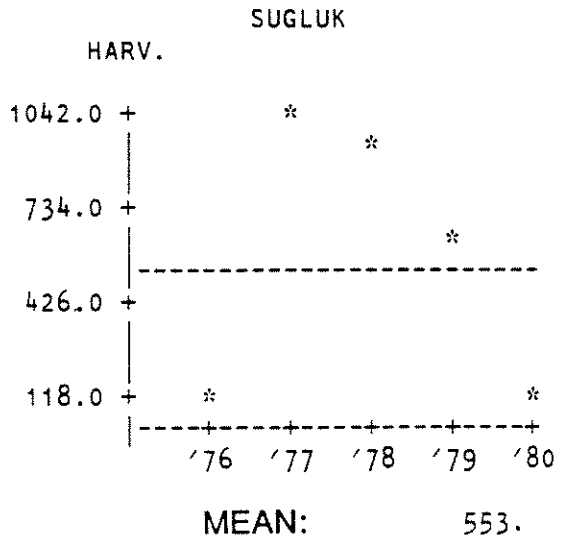
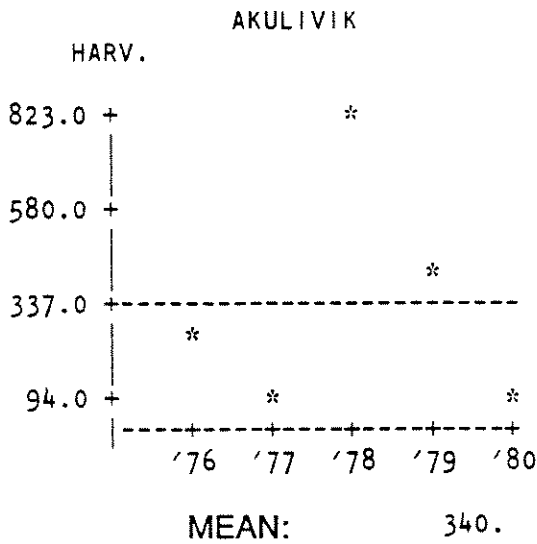
CARIBOU



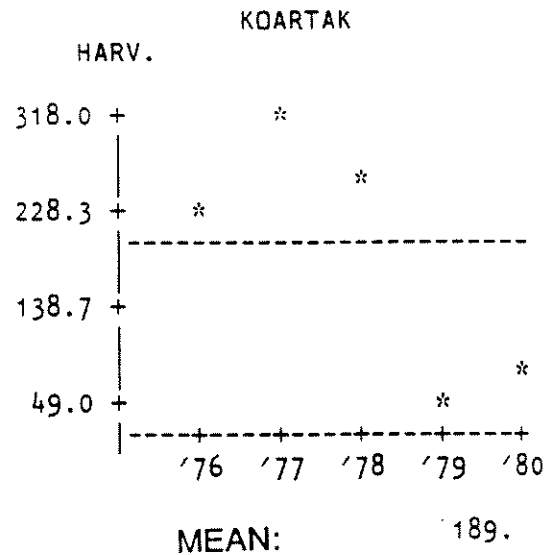
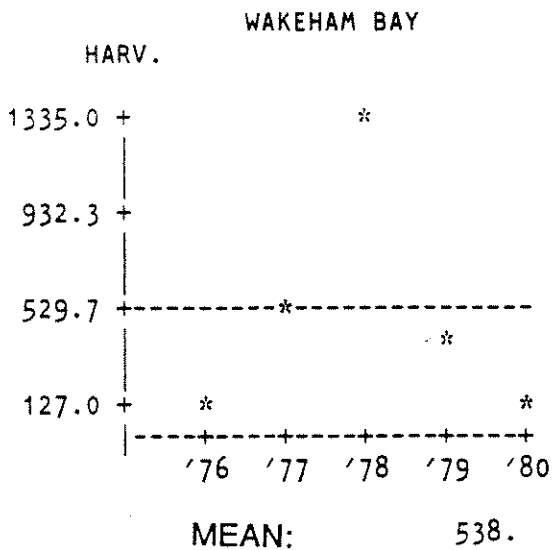
ARCTIC FOX



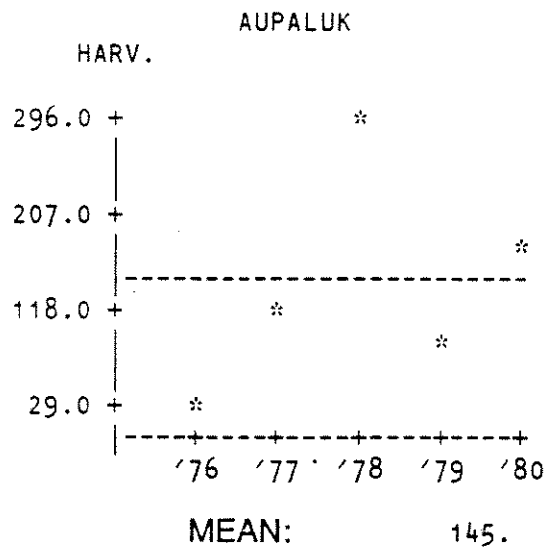
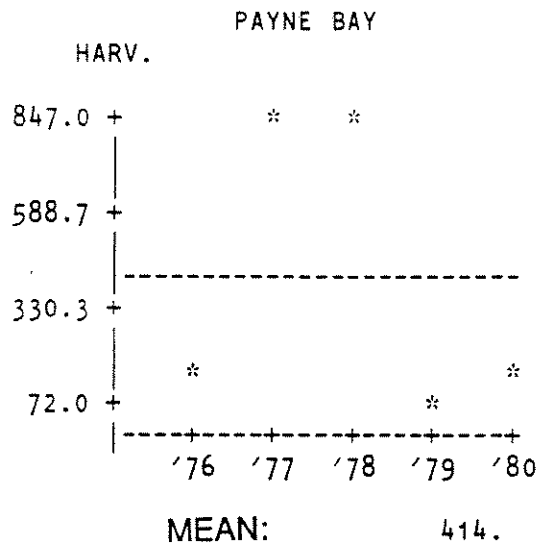
ARCTIC FOX



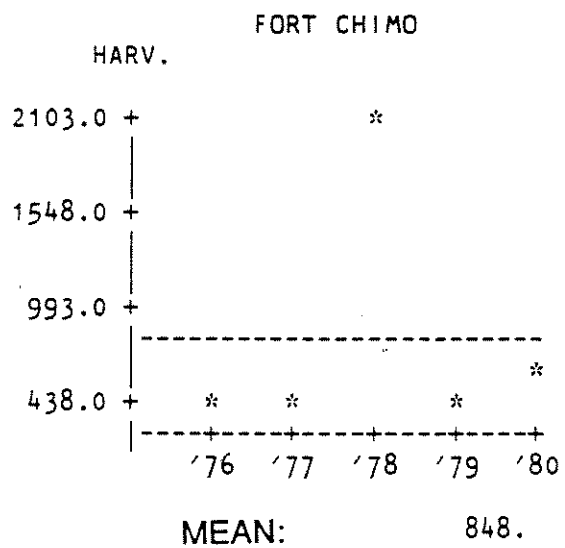
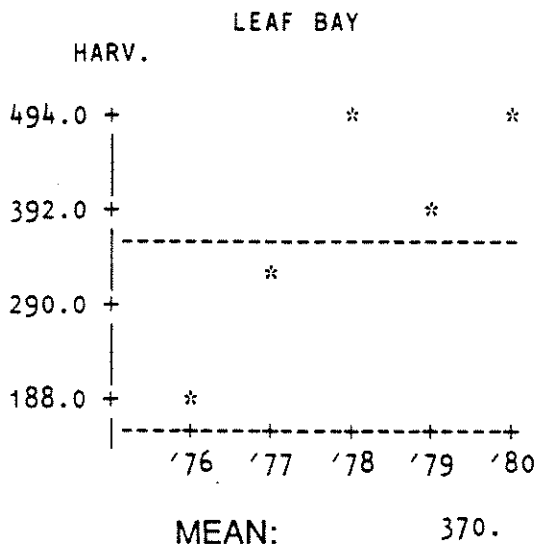
ARCTIC FOX



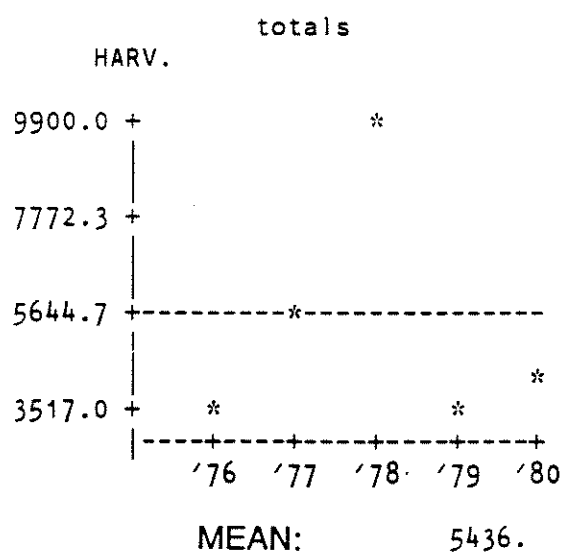
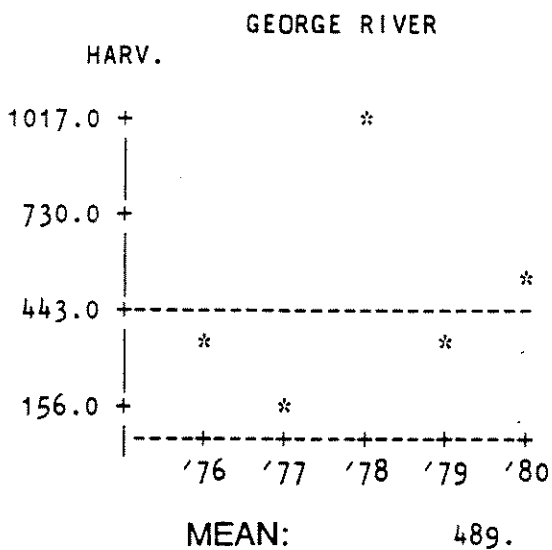
ARCTIC FOX



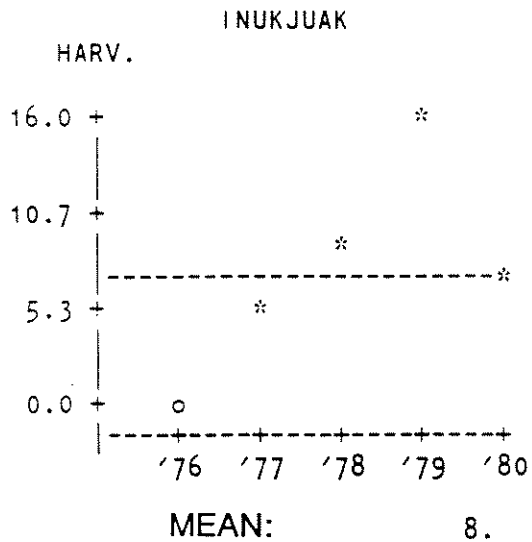
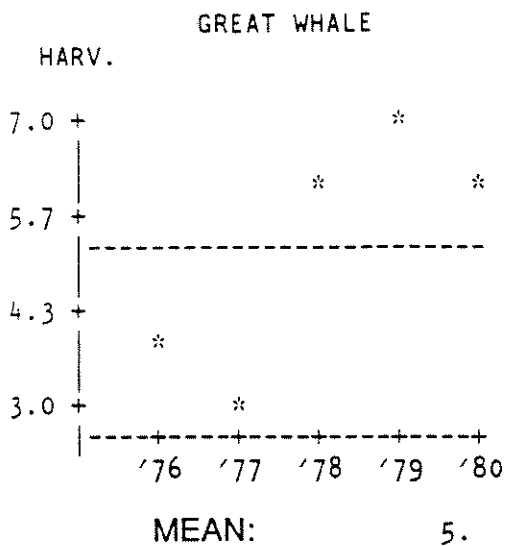
ARCTIC FOX



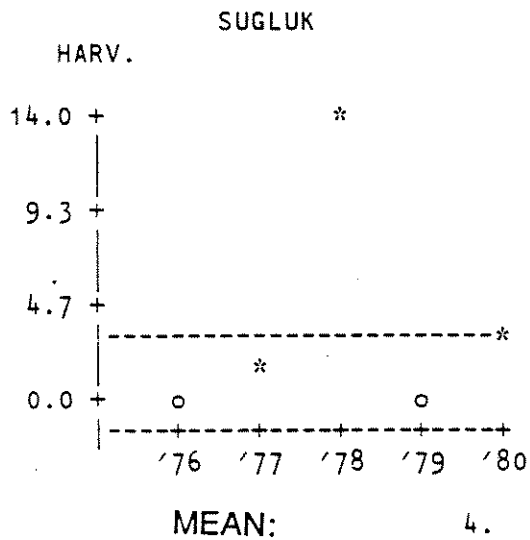
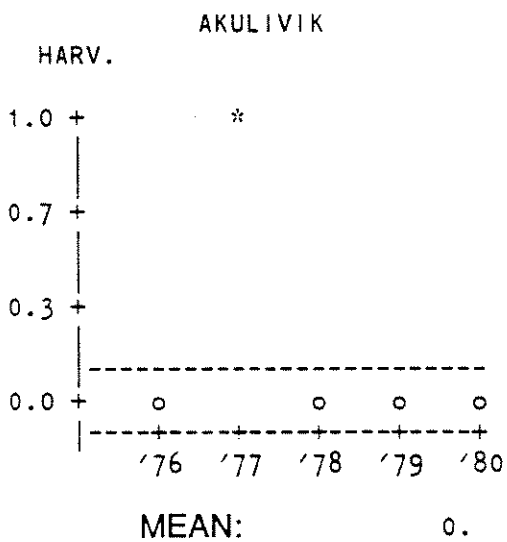
ARCTIC FOX



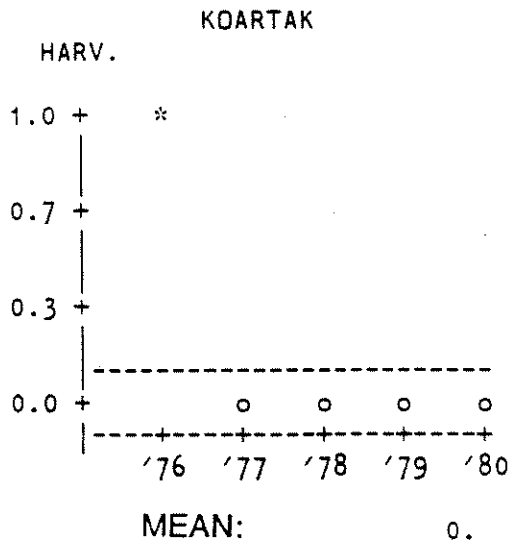
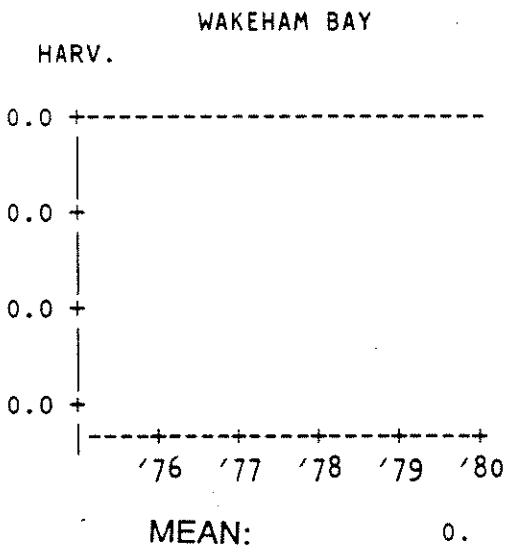
WOLF



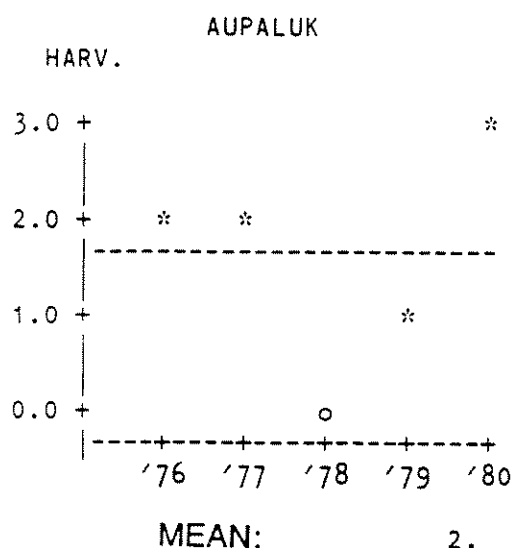
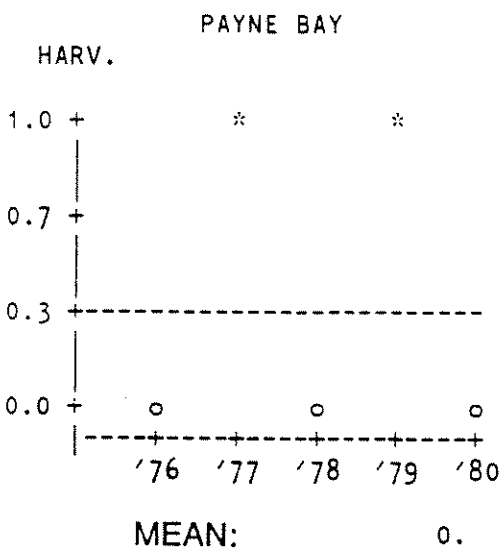
WOLF



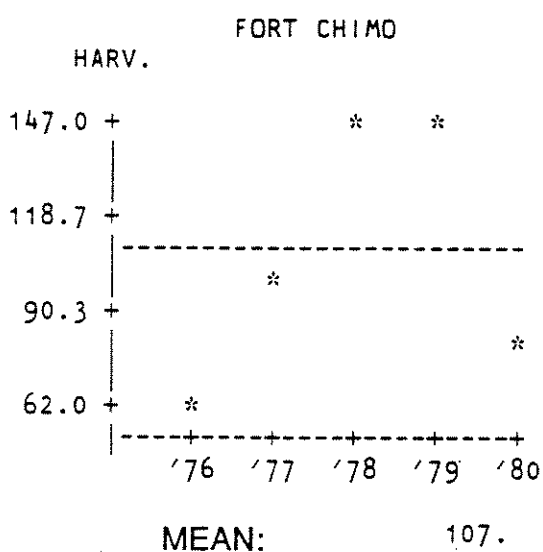
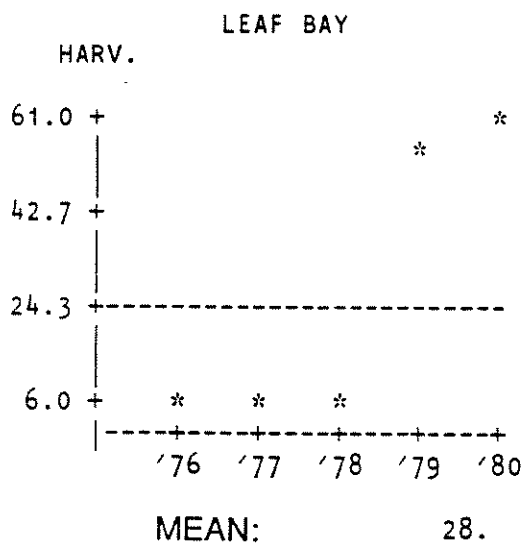
WOLF



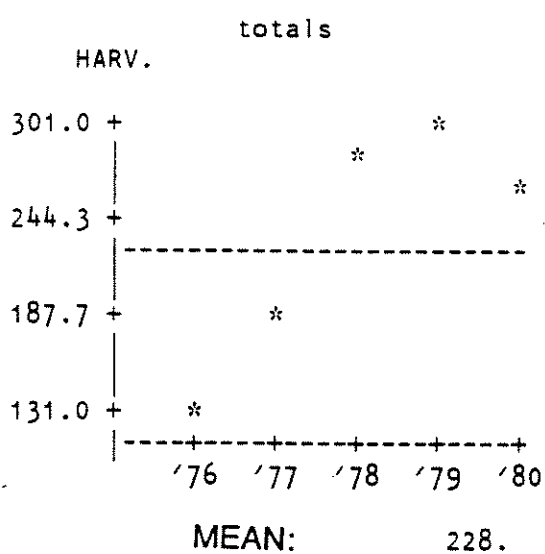
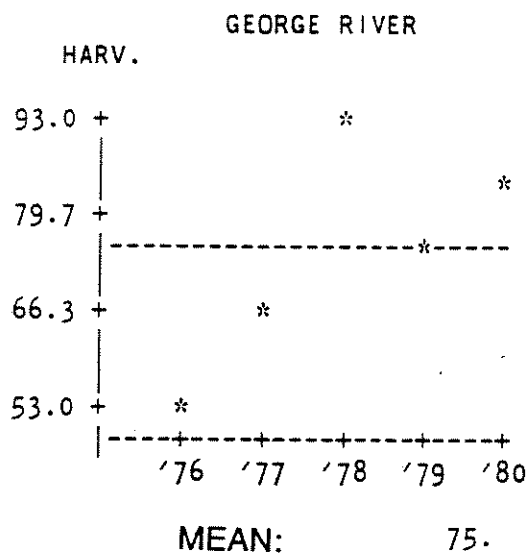
WOLF



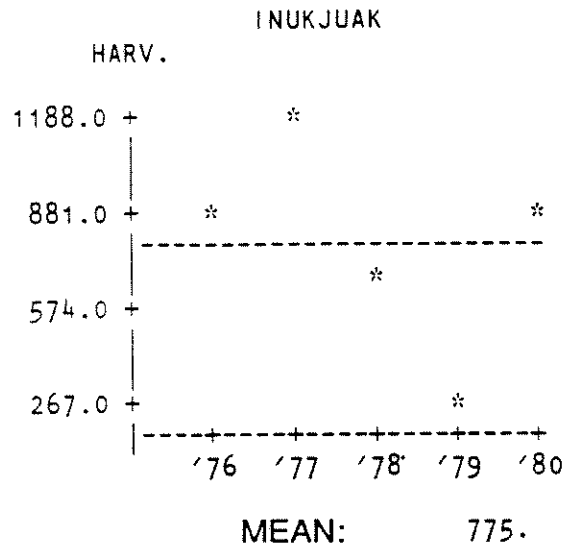
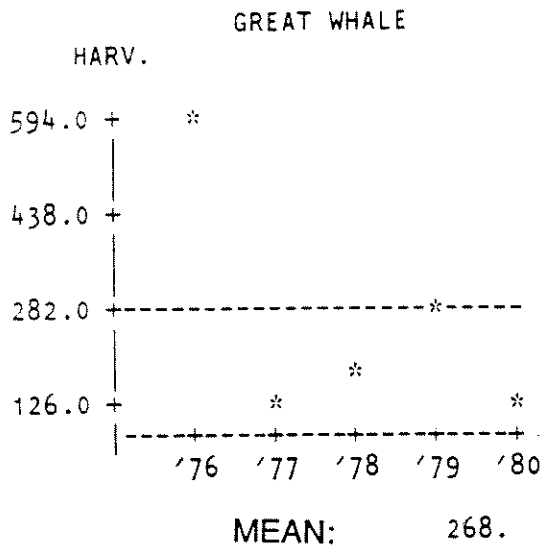
WOLF



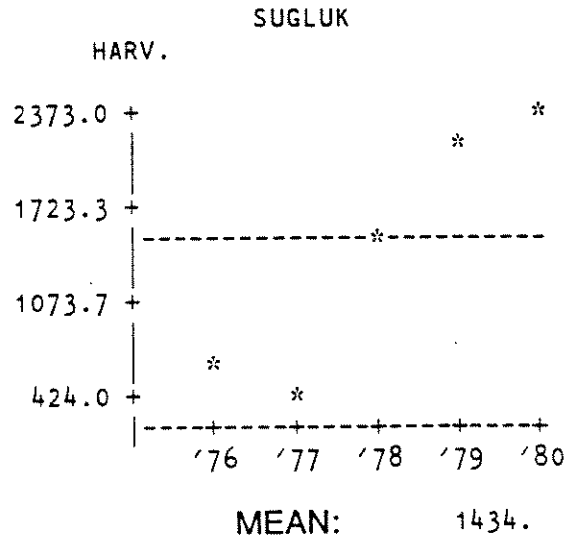
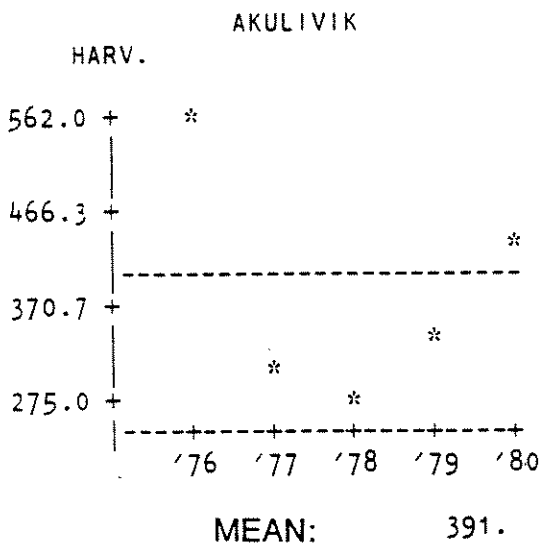
WOLF



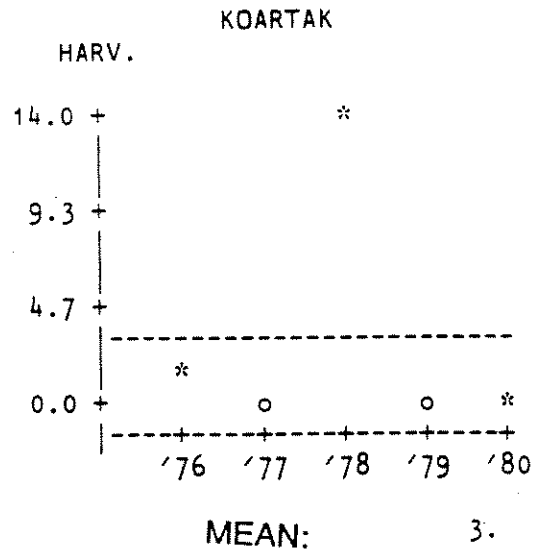
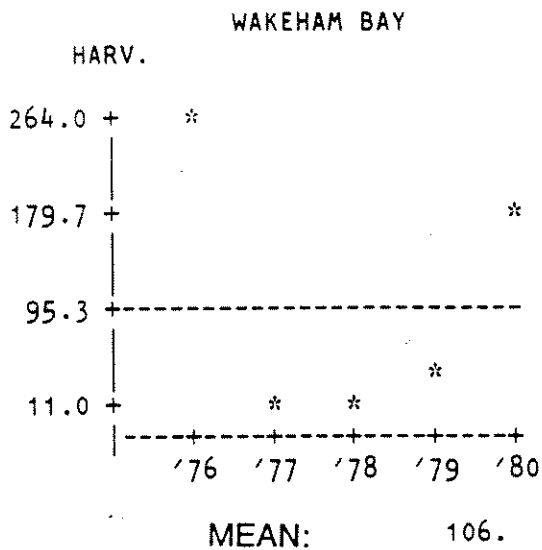
SNOW GOOSE, SPRING



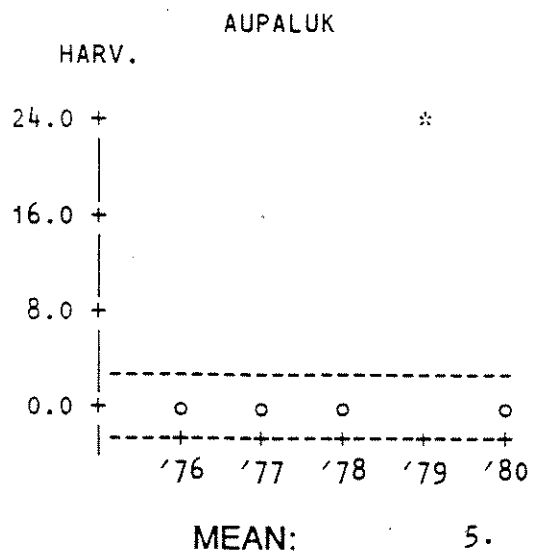
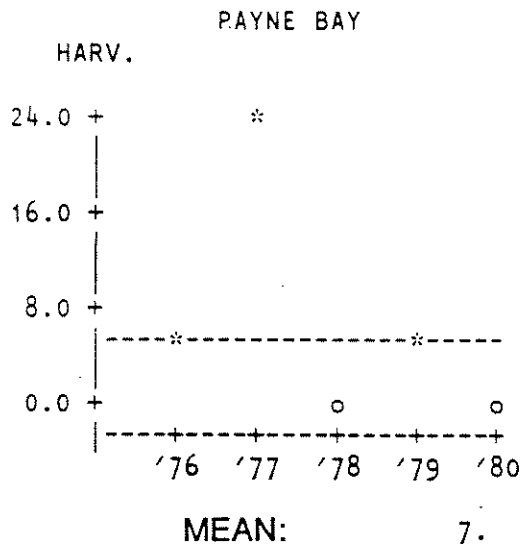
SNOW GOOSE, SPRING



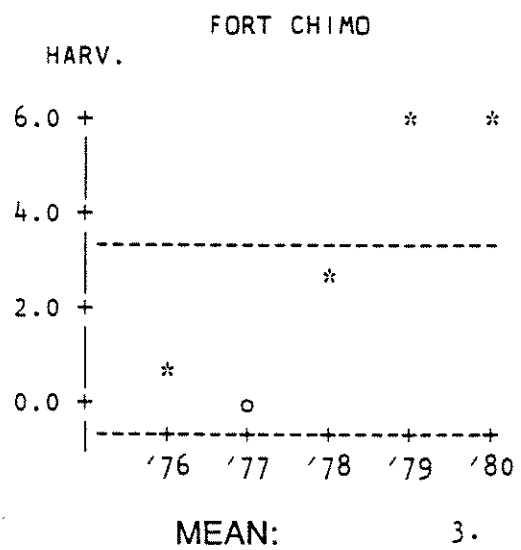
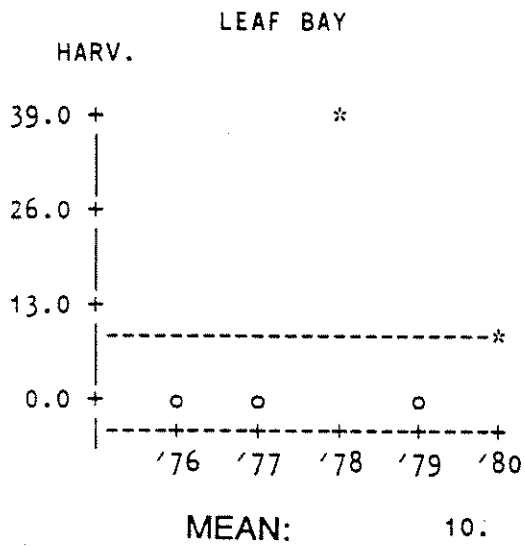
SNOW GOOSE, SPRING



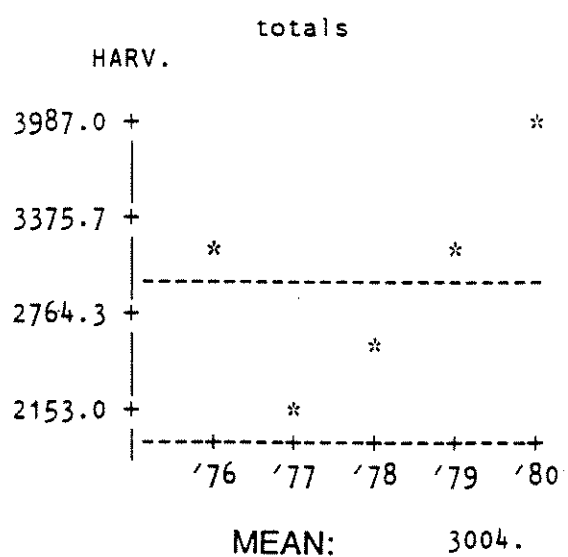
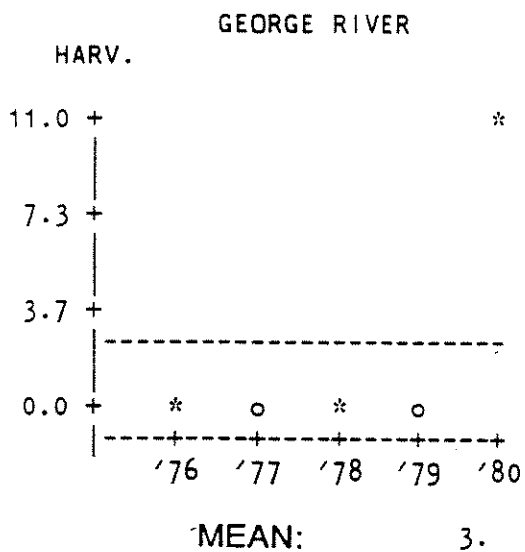
SNOW GOOSE, SPRING



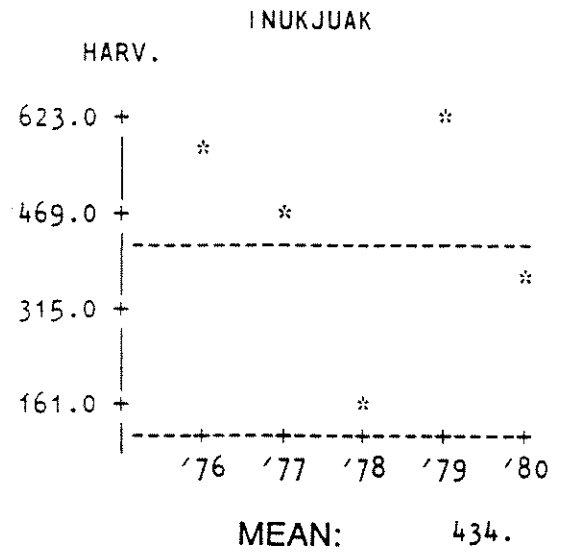
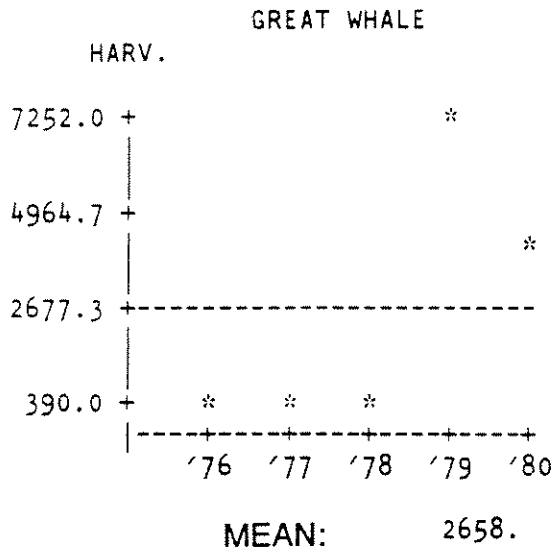
SNOW GOOSE, SPRING



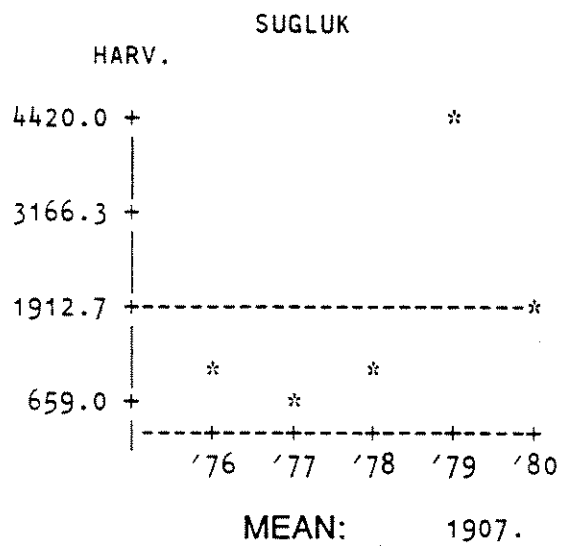
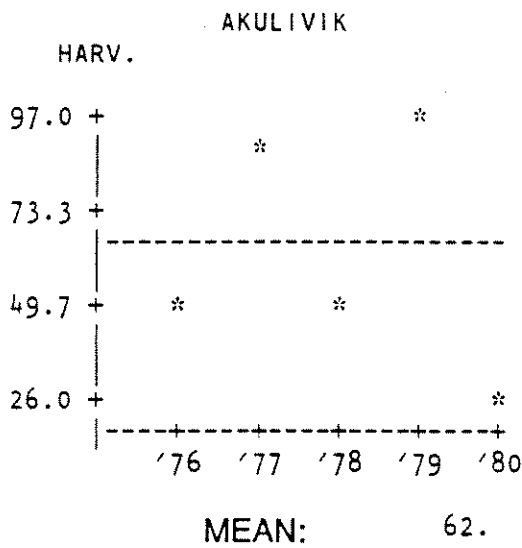
SNOW GOOSE, SPRING



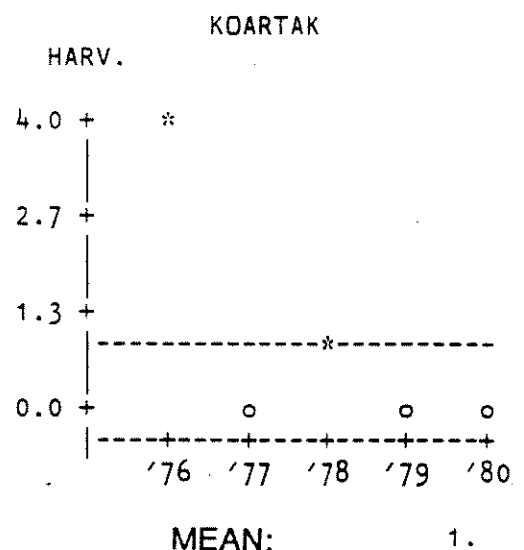
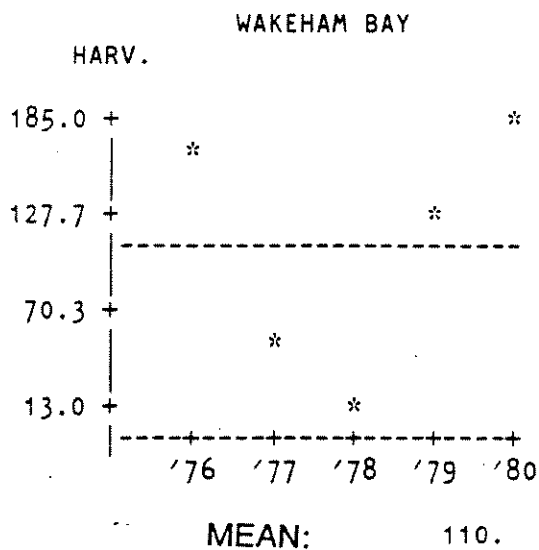
SNOW GOOSE, WINTER



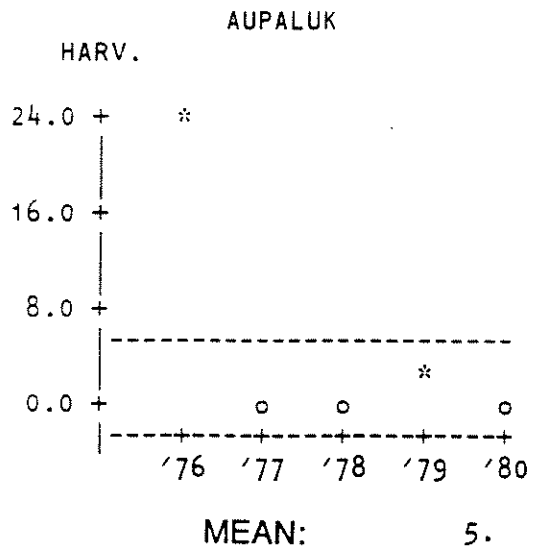
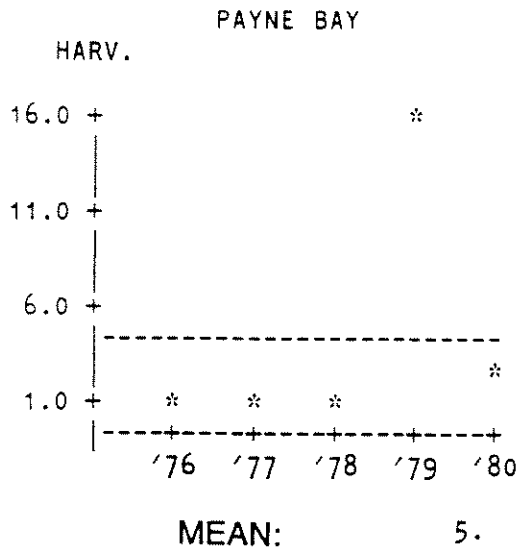
SNOW GOOSE, WINTER



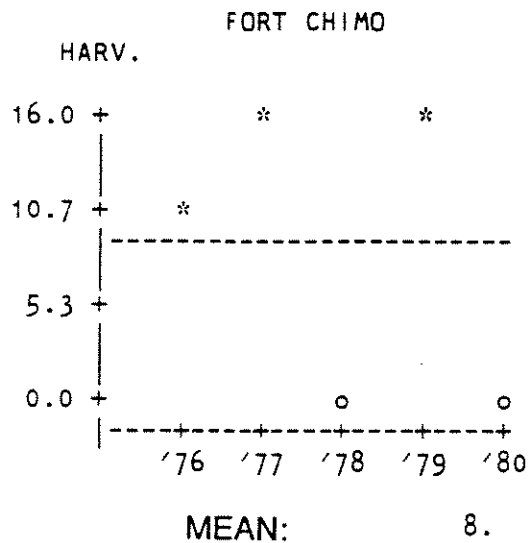
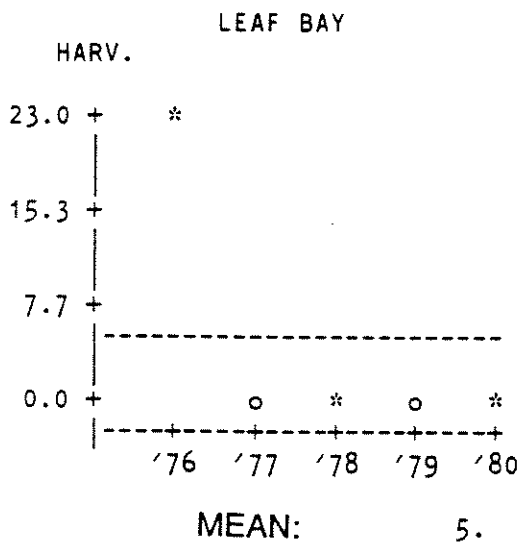
SNOW GOOSE, WINTER



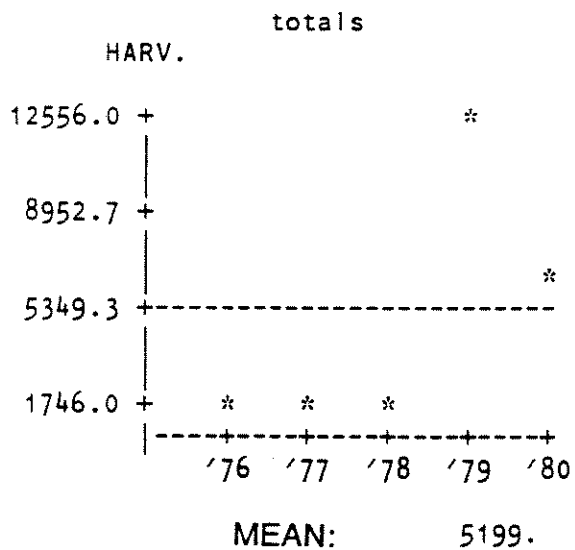
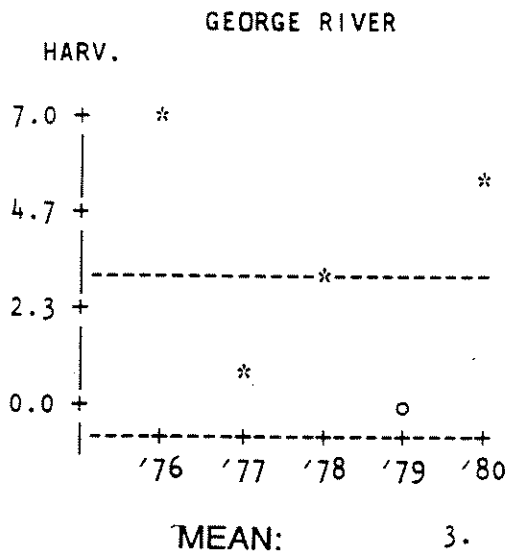
SNOW GOOSE, WINTER



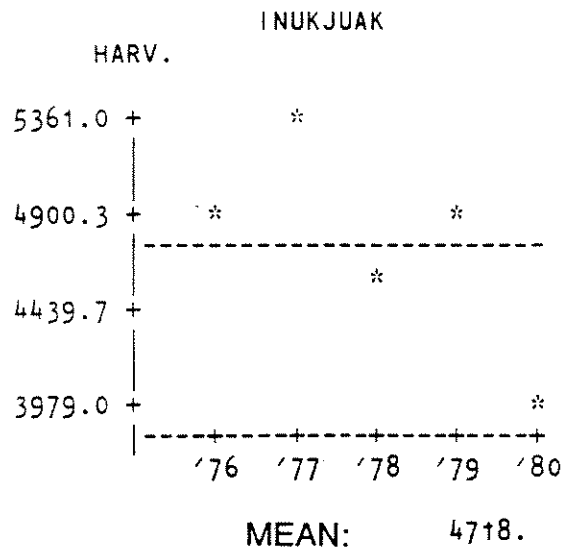
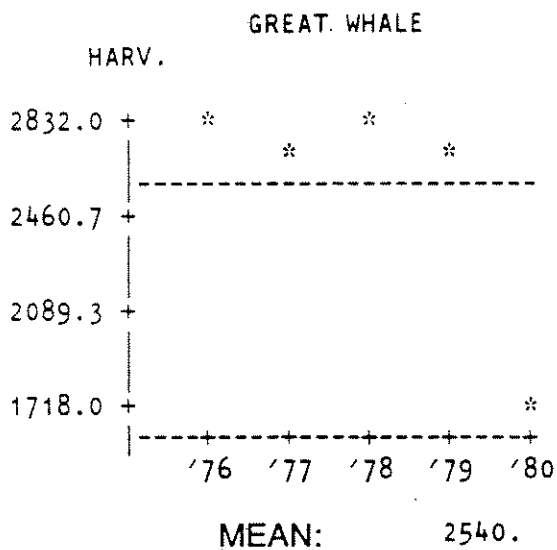
SNOW GOOSE, WINTER



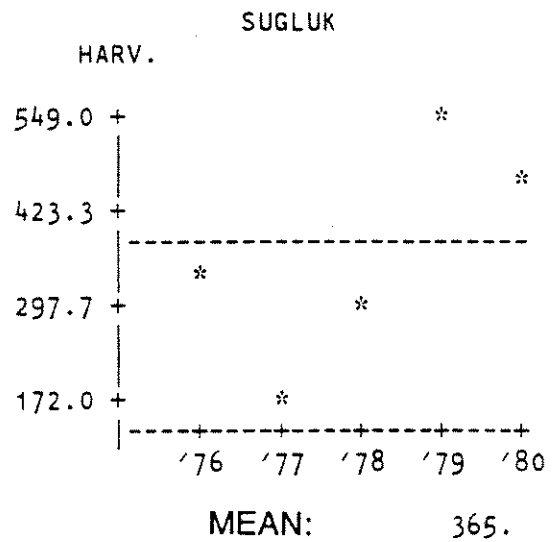
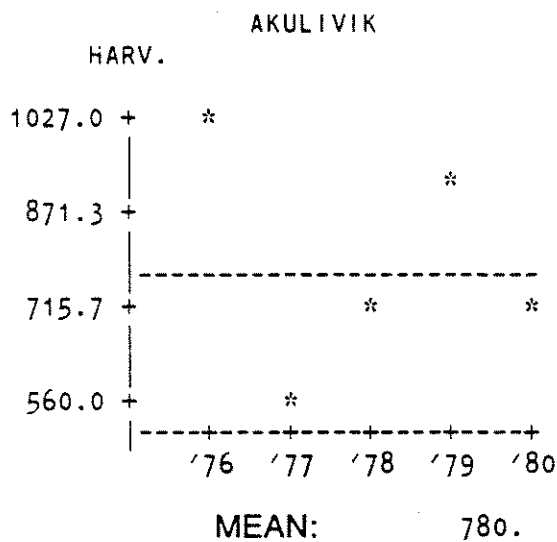
SNOW GOOSE, WINTER



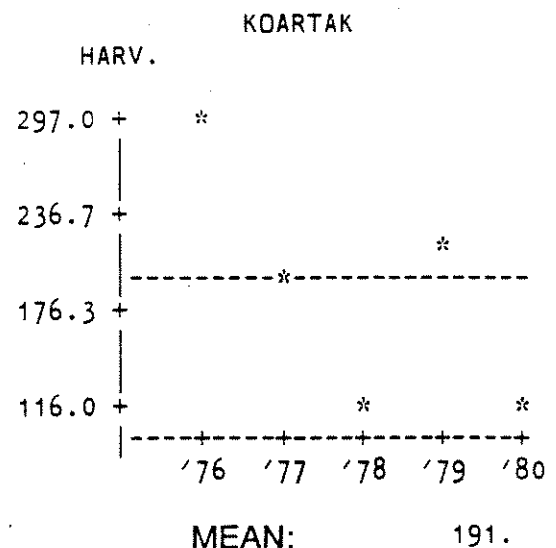
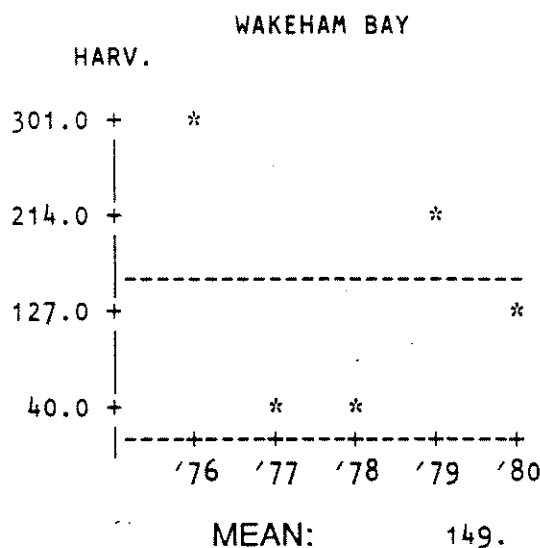
CANADA GOOSE, SPRING



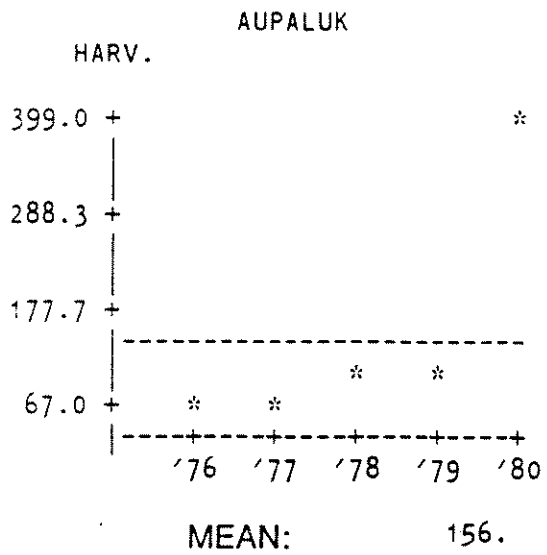
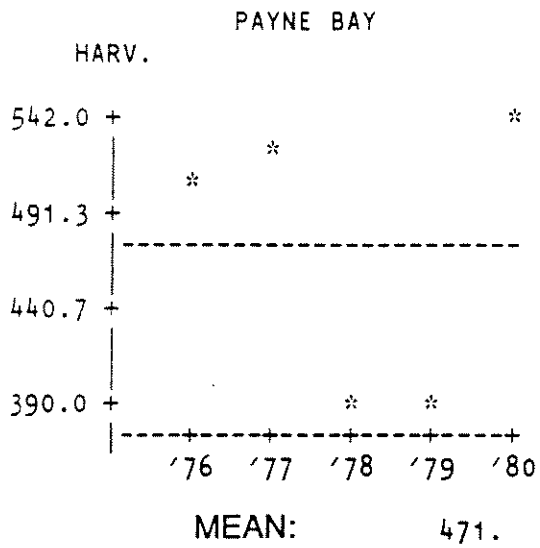
CANADA GOOSE, SPRING



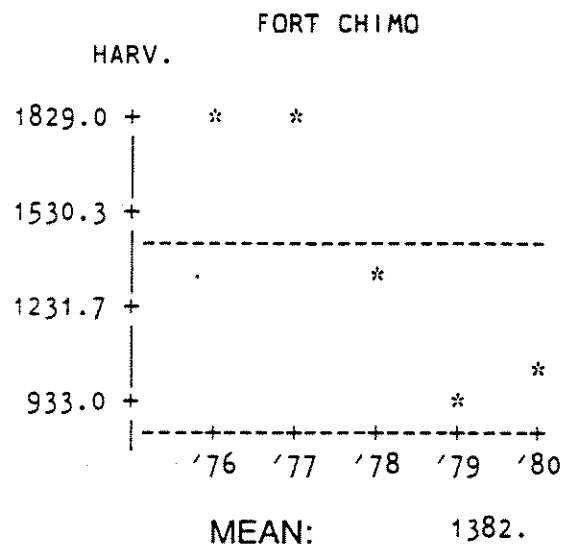
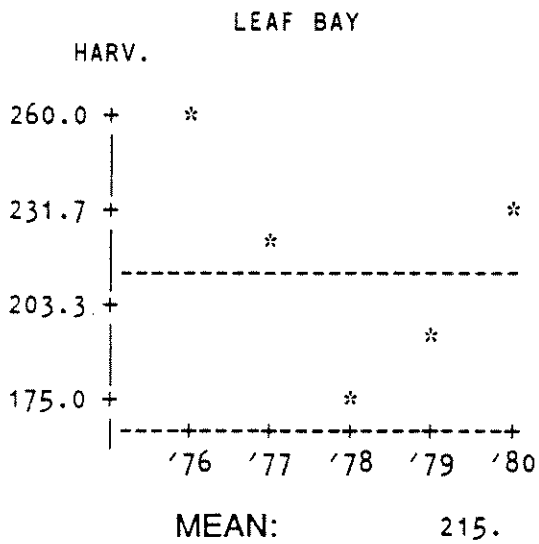
CANADA GOOSE, SPRING



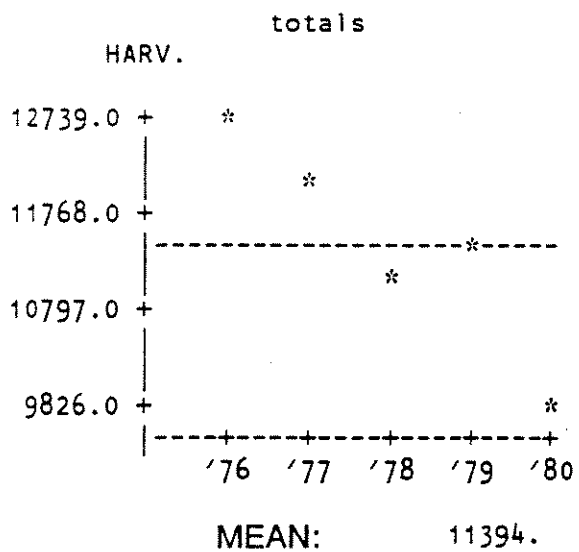
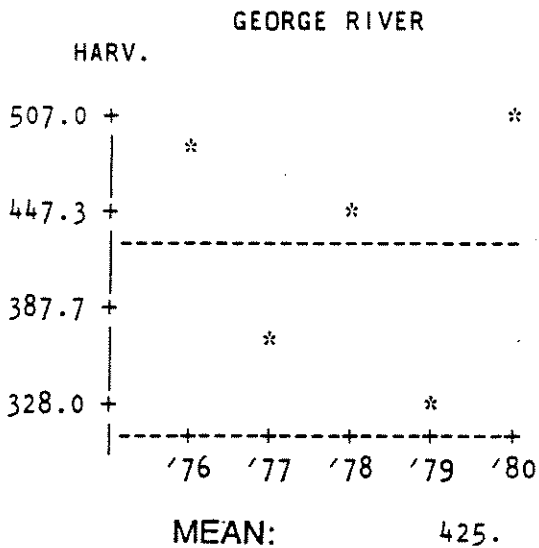
CANADA GOOSE, SPRING



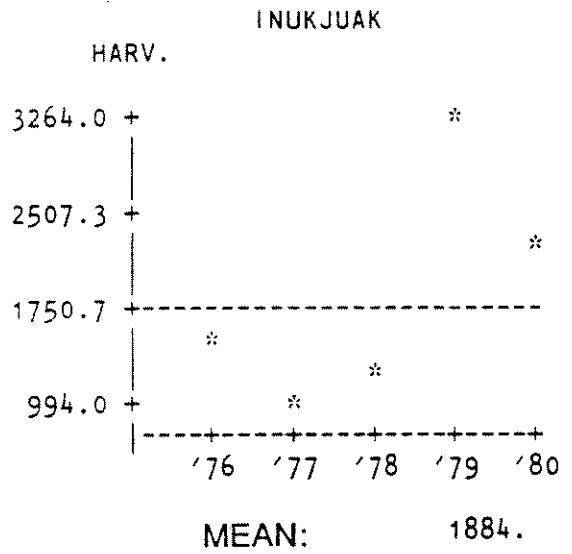
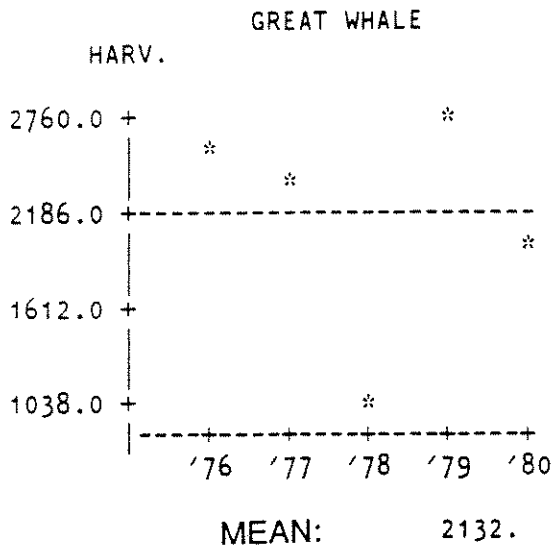
CANADA GOOSE, SPRING



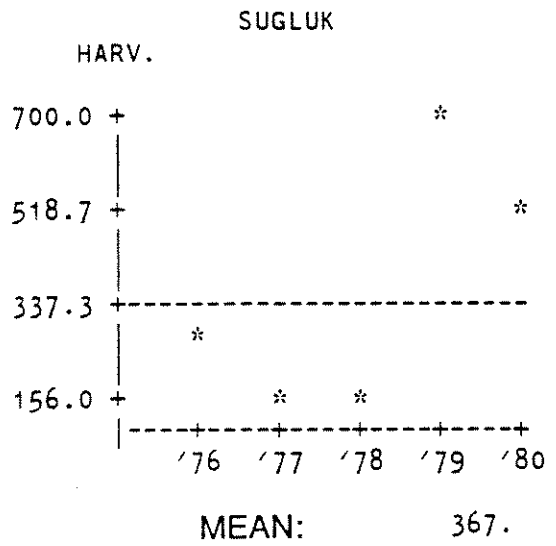
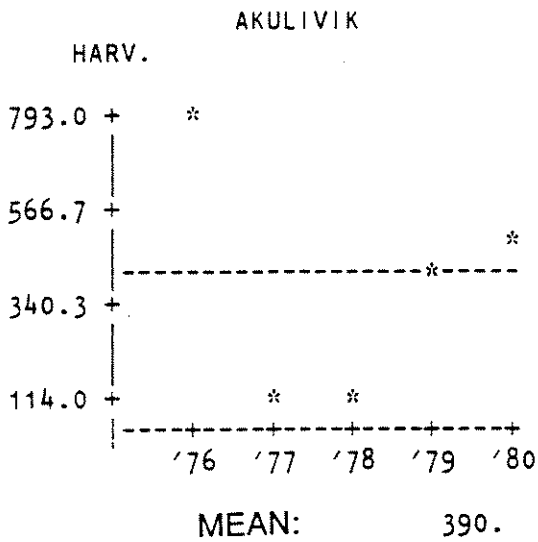
CANADA GOOSE, SPRING



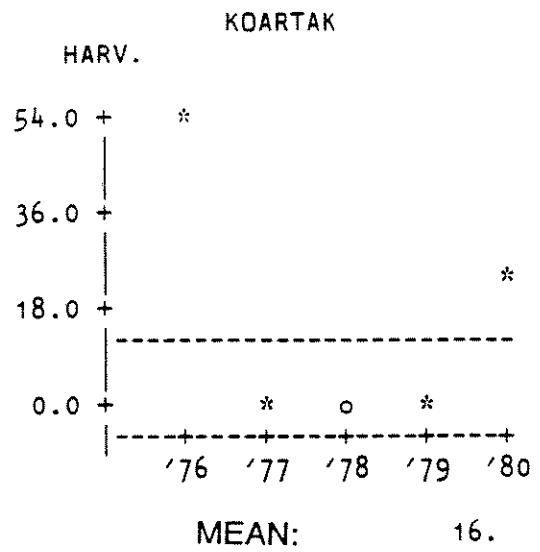
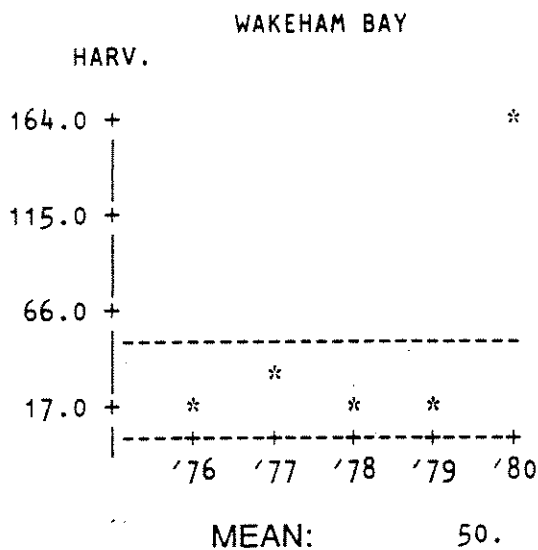
CANADA GOOSE, WINTER



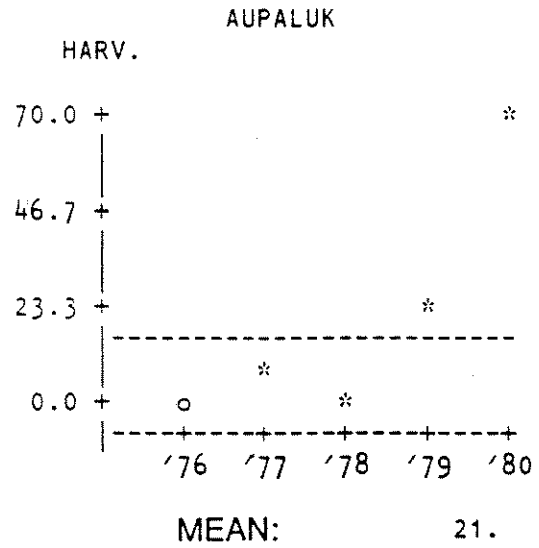
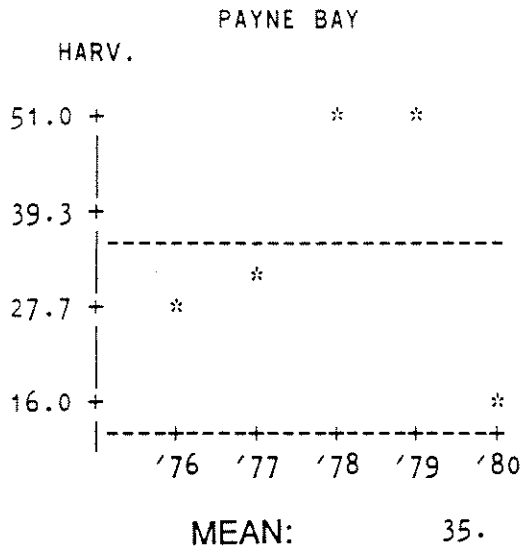
CANADA GOOSE, WINTER



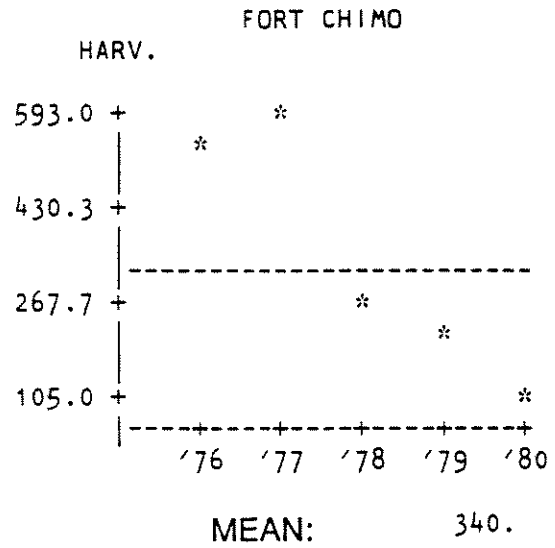
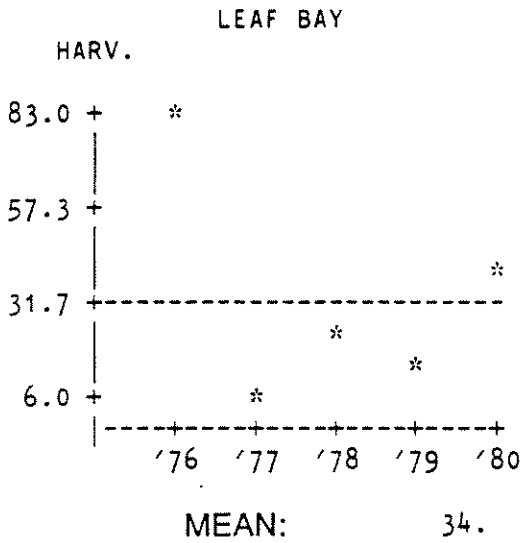
CANADA GOOSE, WINTER



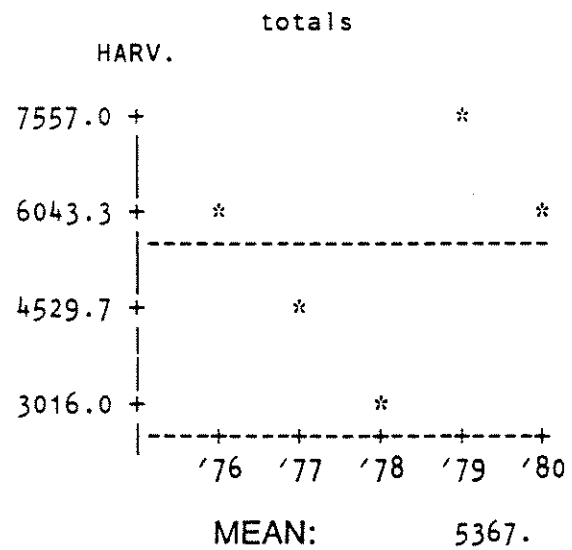
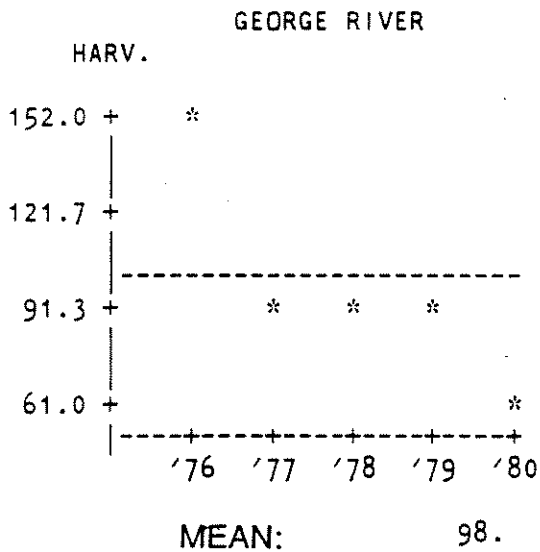
CANADA GOOSE, WINTER



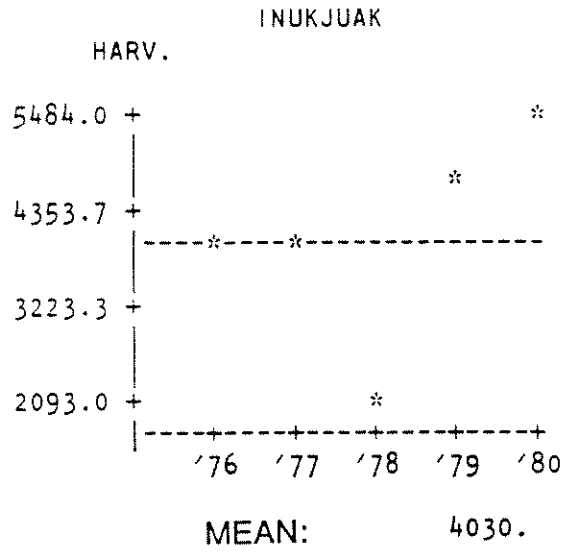
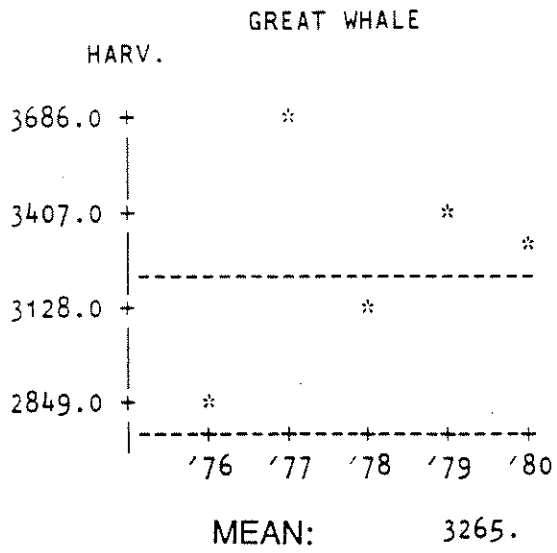
CANADA GOOSE, WINTER



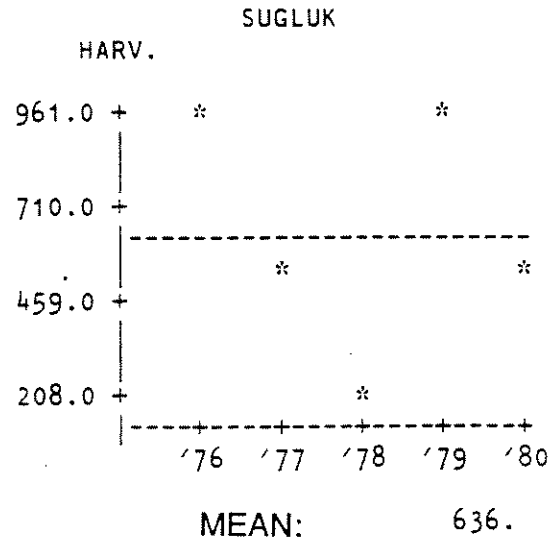
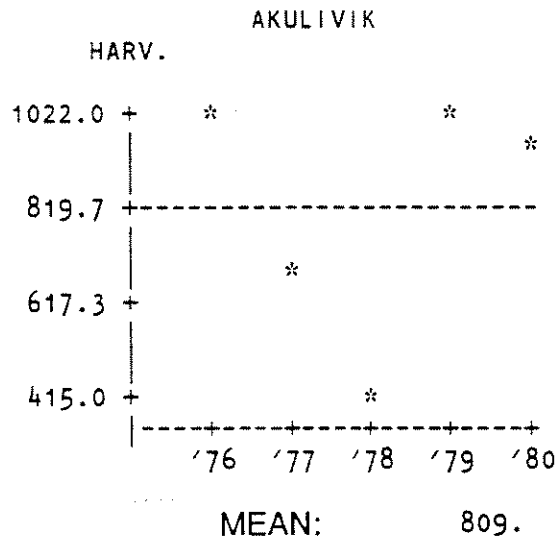
CANADA GOOSE, WINTER



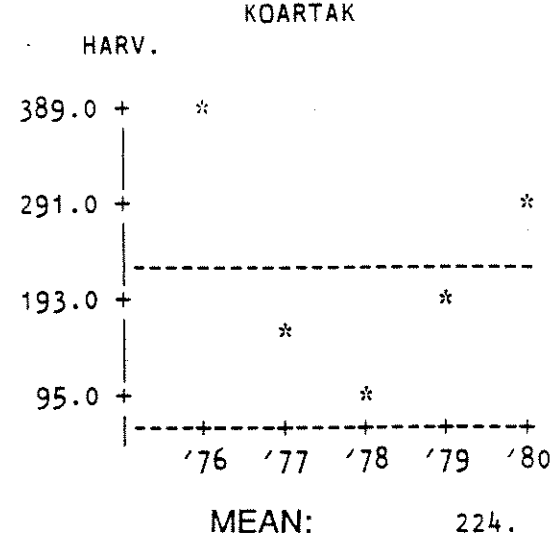
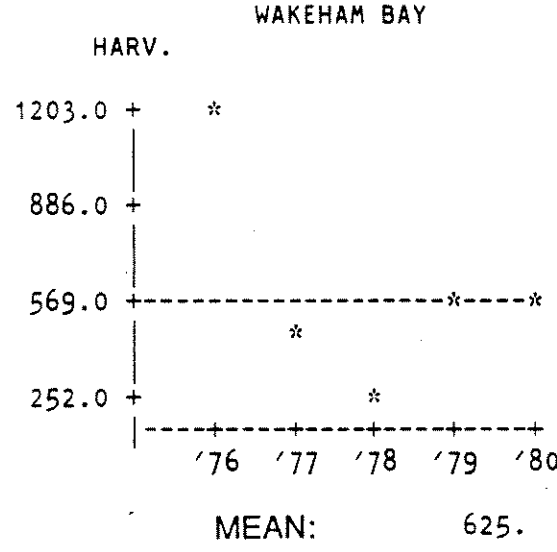
DUCKS



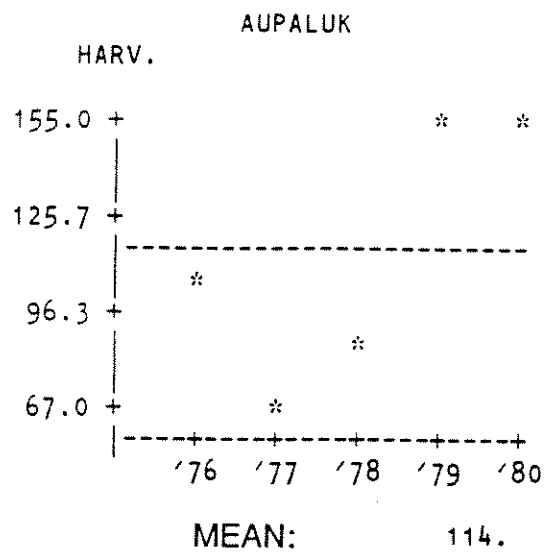
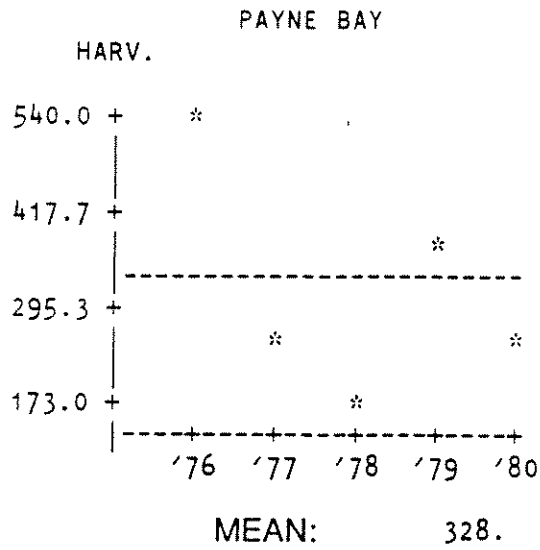
DUCKS



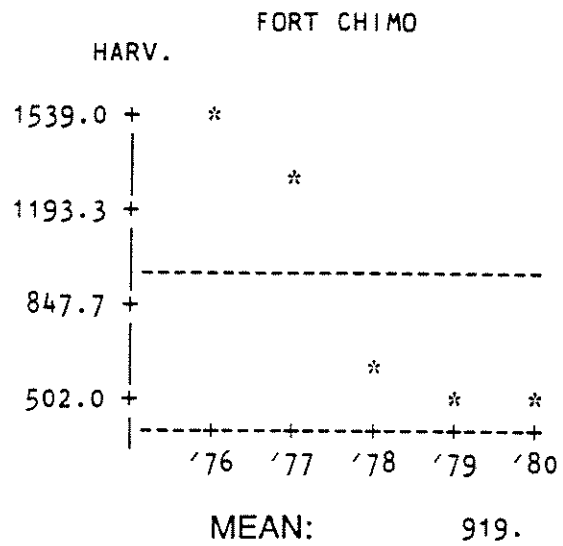
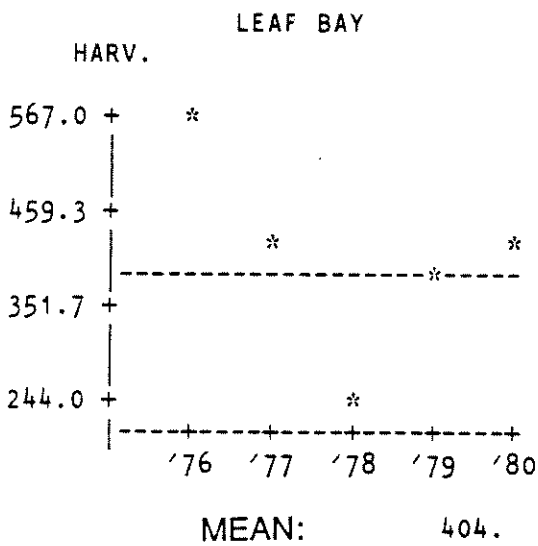
DUCKS



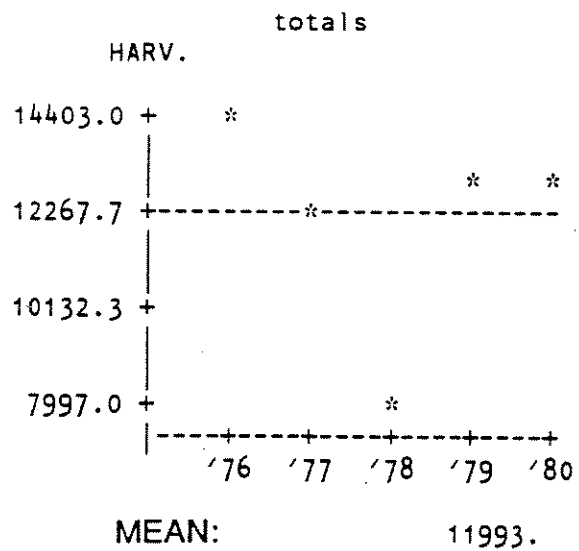
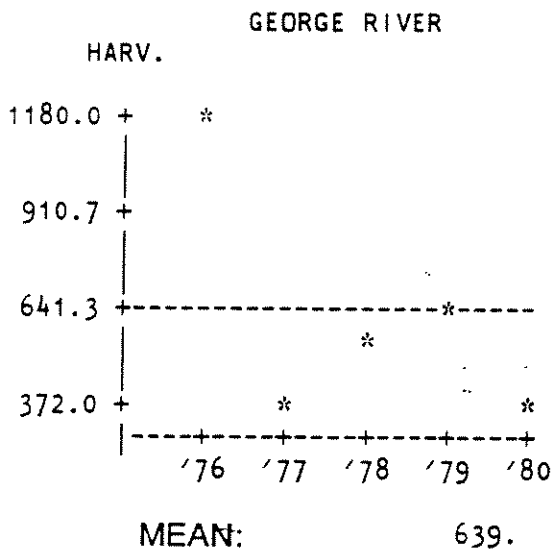
DUCKS



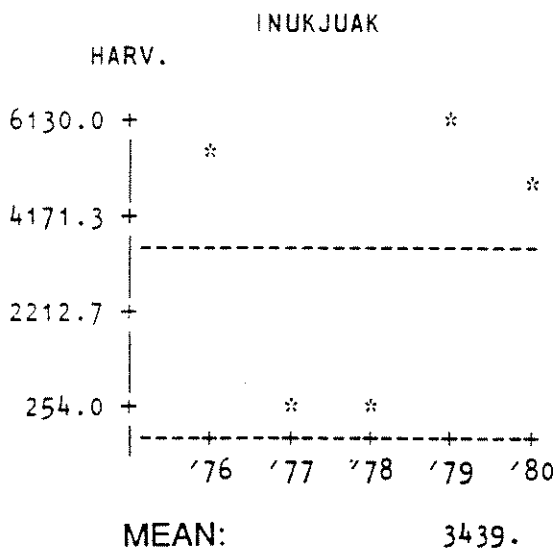
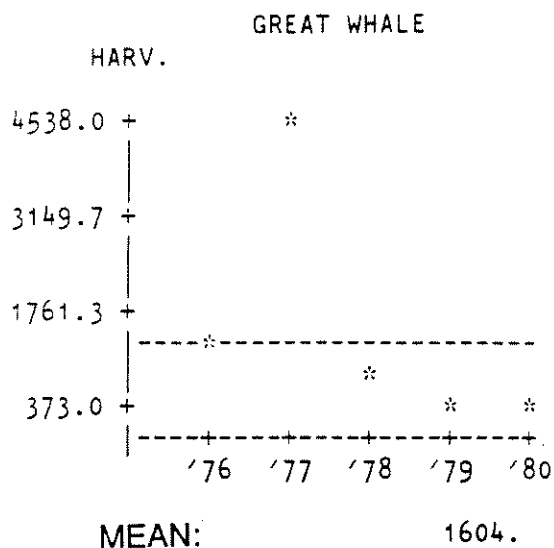
DUCKS



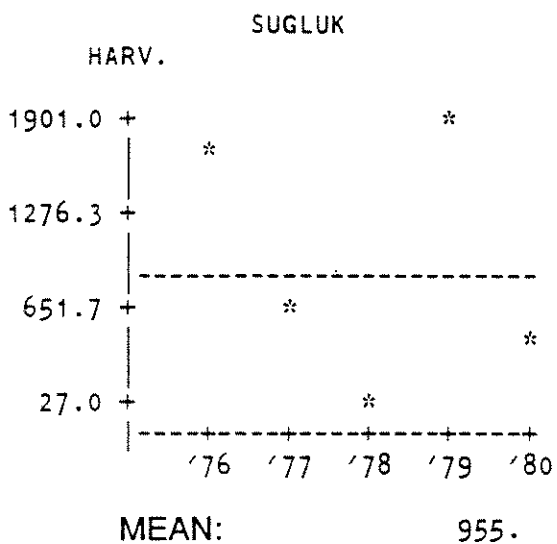
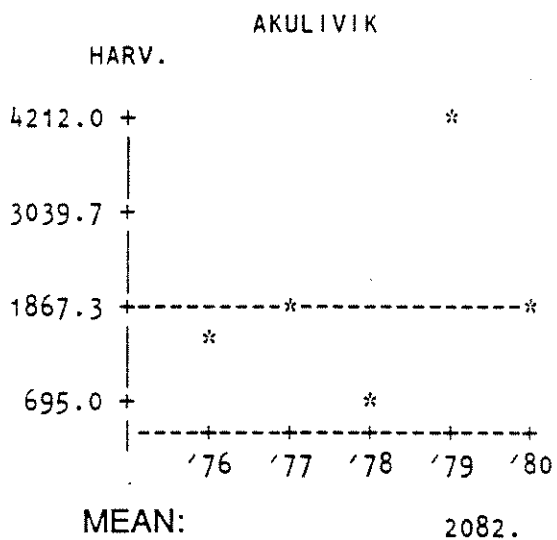
DUCKS



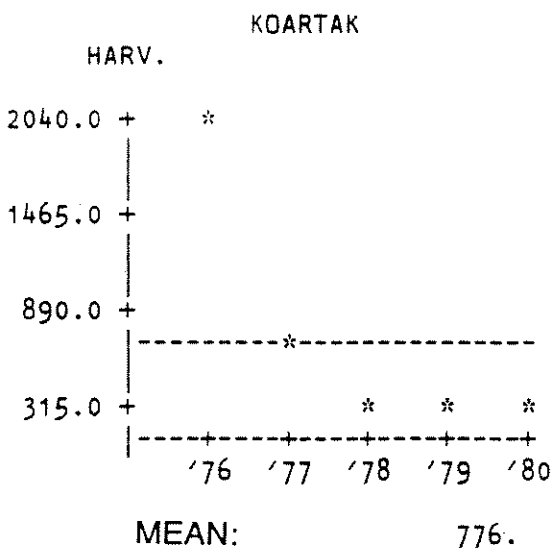
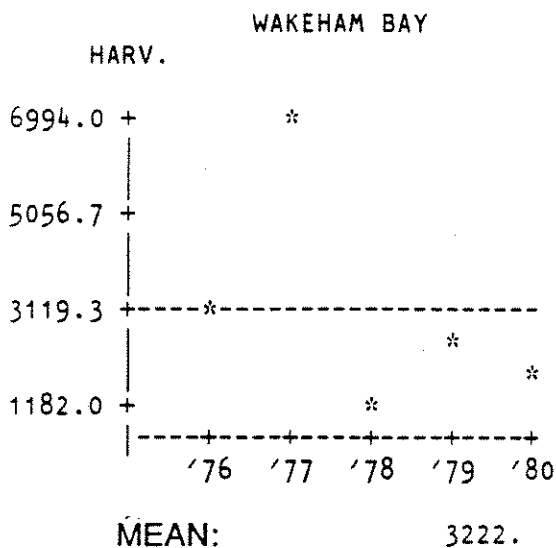
DUCK EGGS



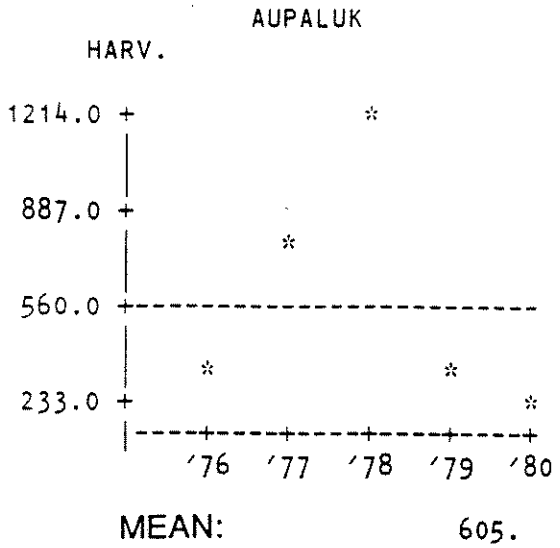
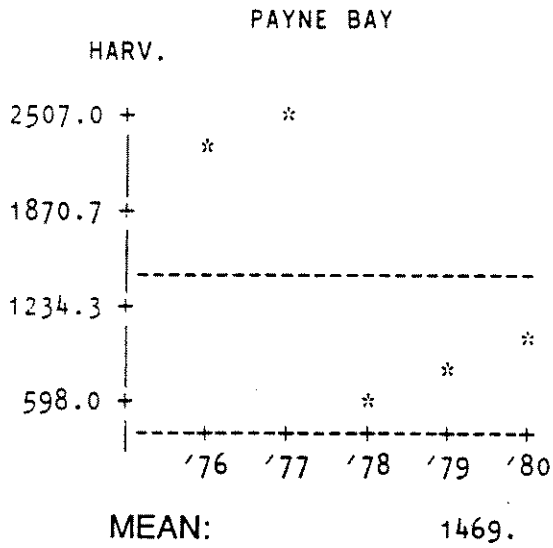
DUCK EGGS



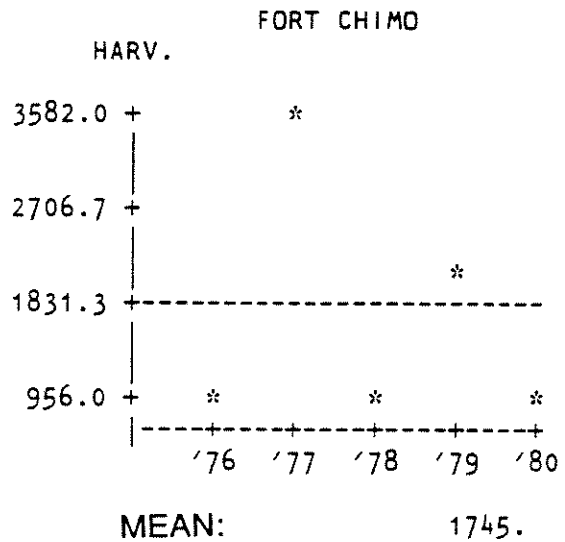
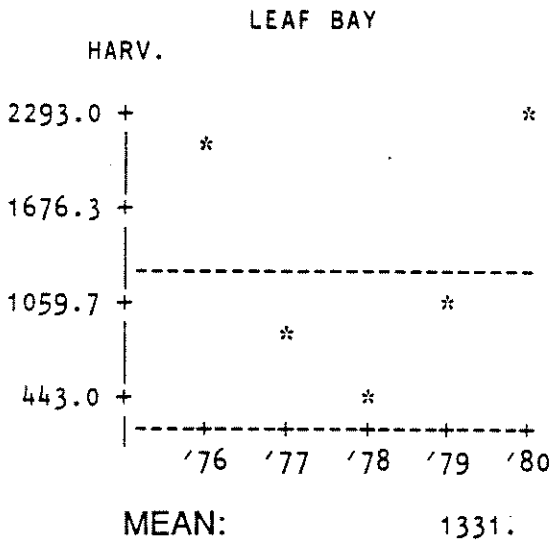
DUCK EGGS



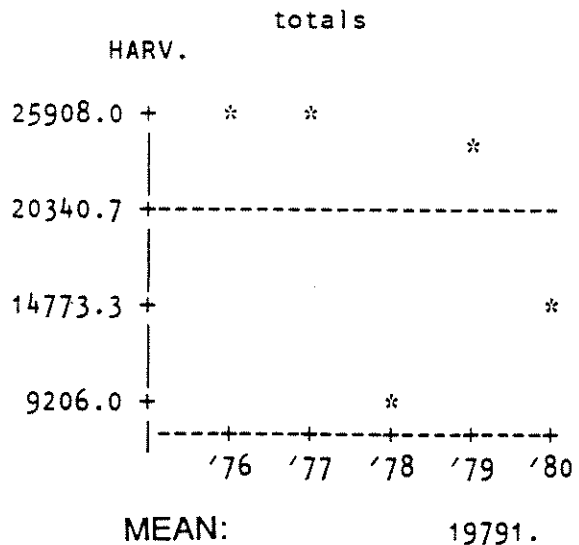
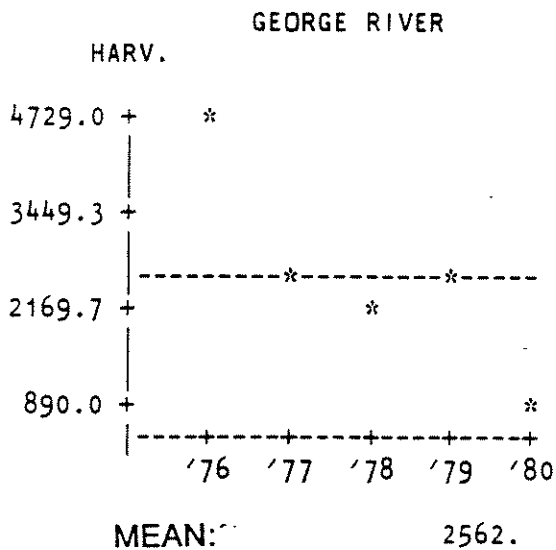
DUCK EGGS



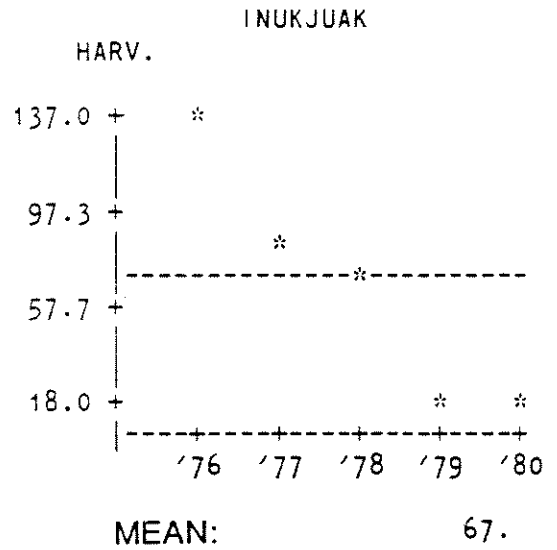
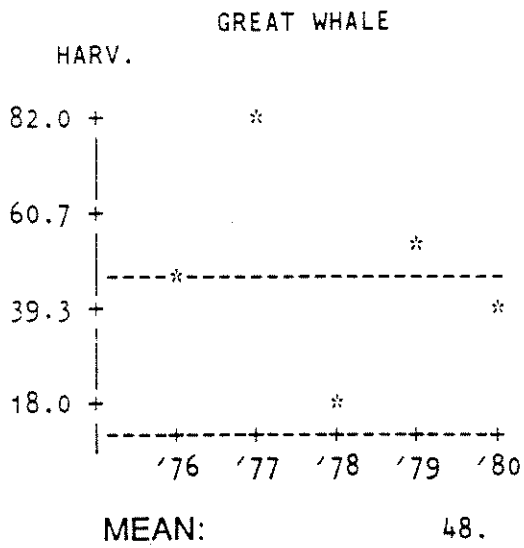
DUCK EGGS



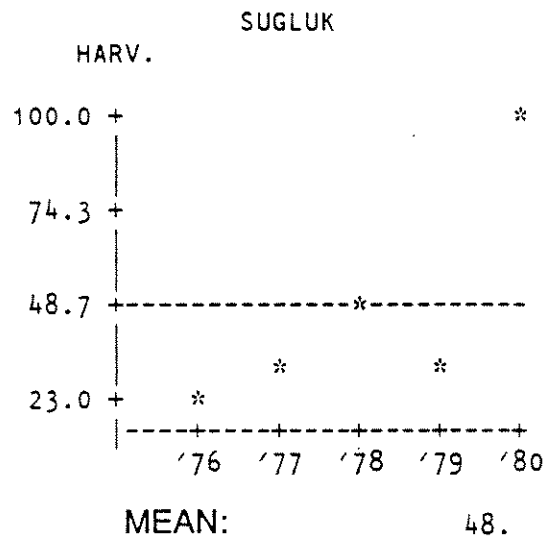
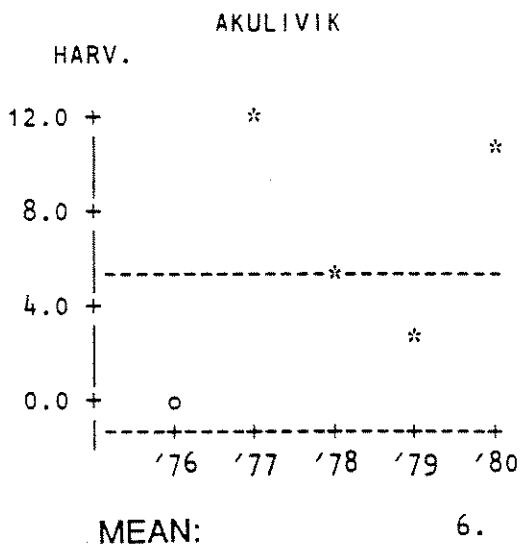
DUCK EGGS



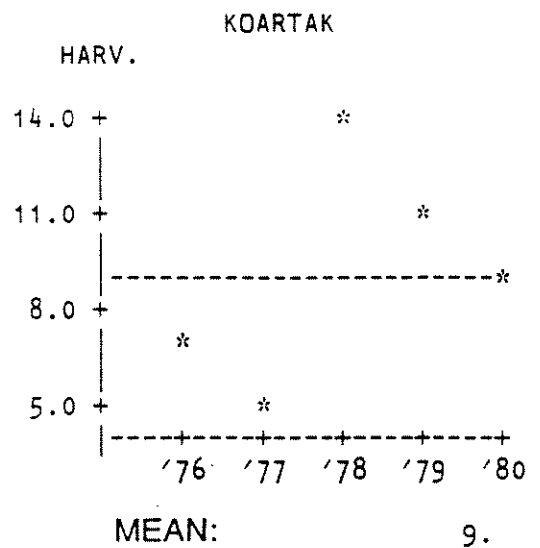
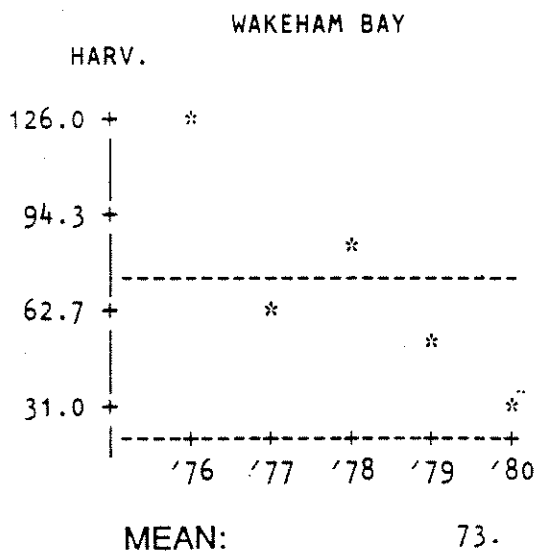
ARCTIC HARE



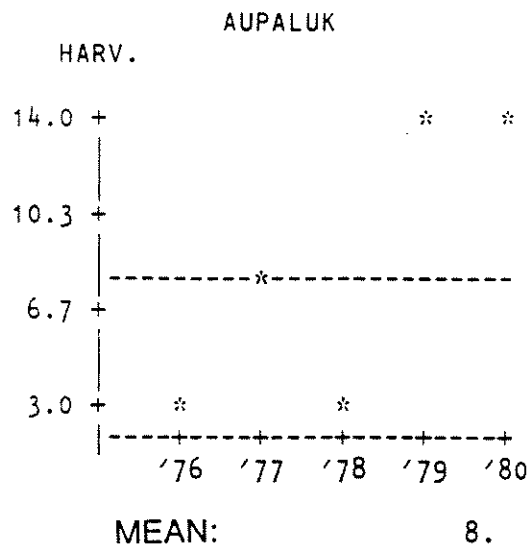
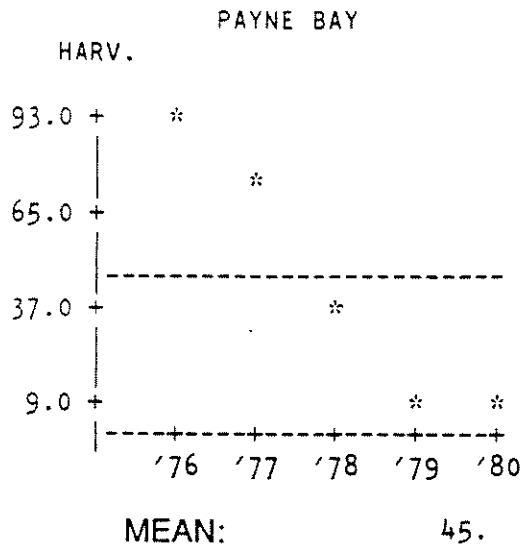
ARCTIC HARE



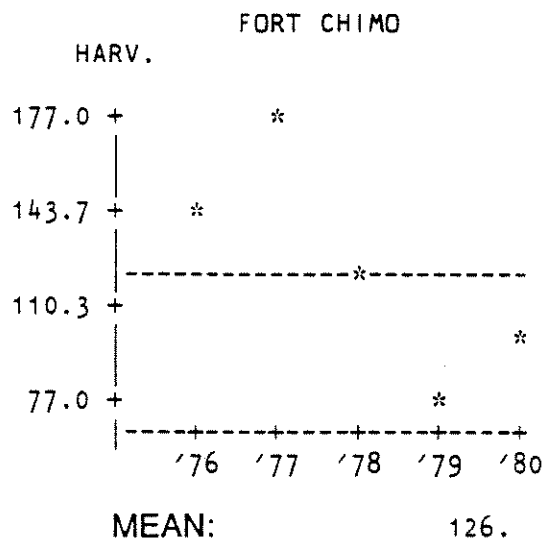
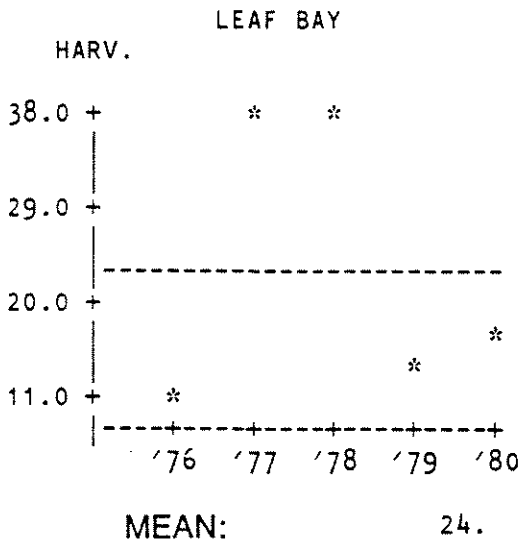
ARCTIC HARE



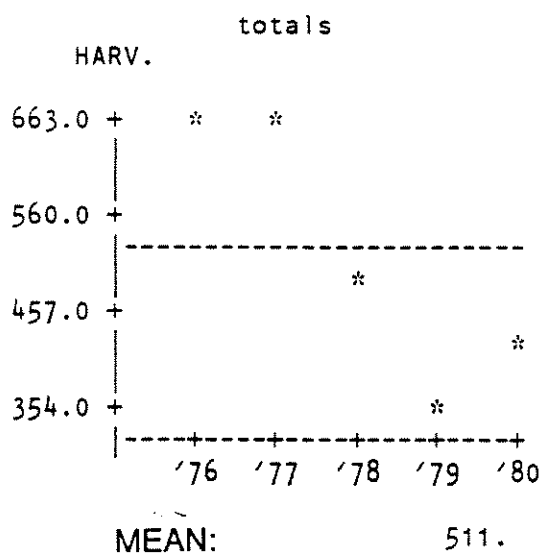
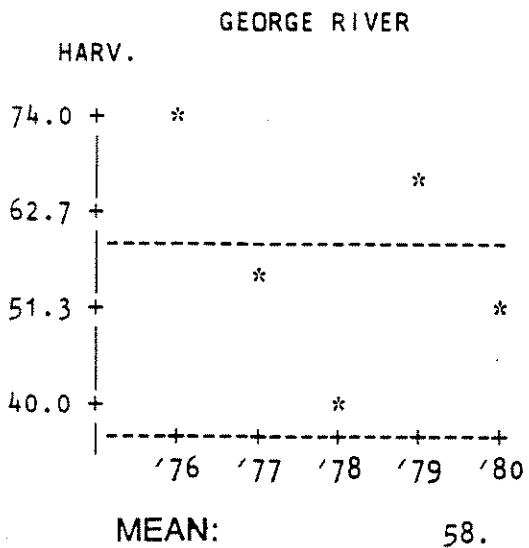
ARCTIC HARE



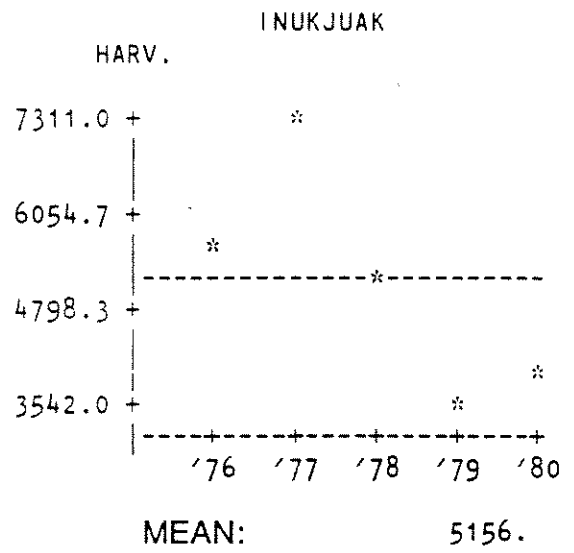
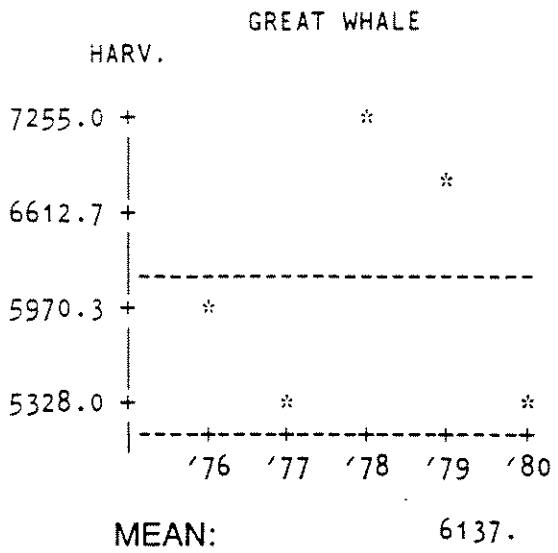
ARCTIC HARE



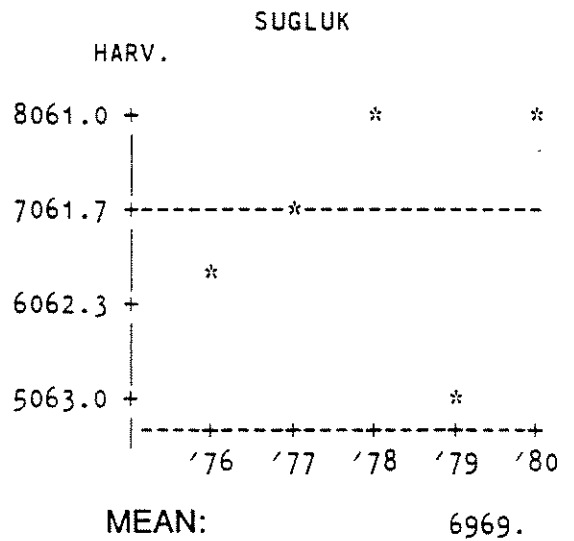
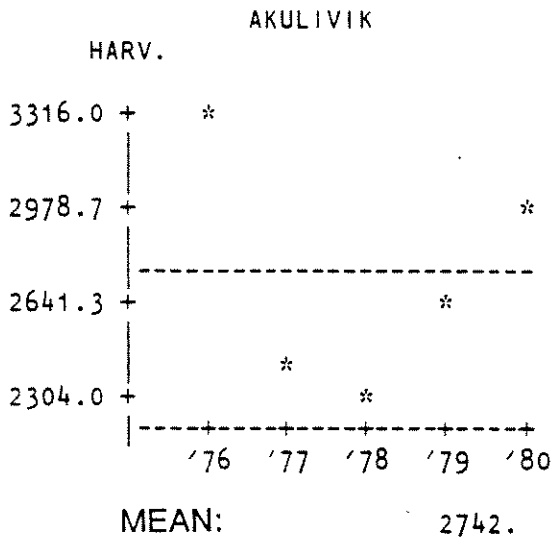
ARCTIC HARE



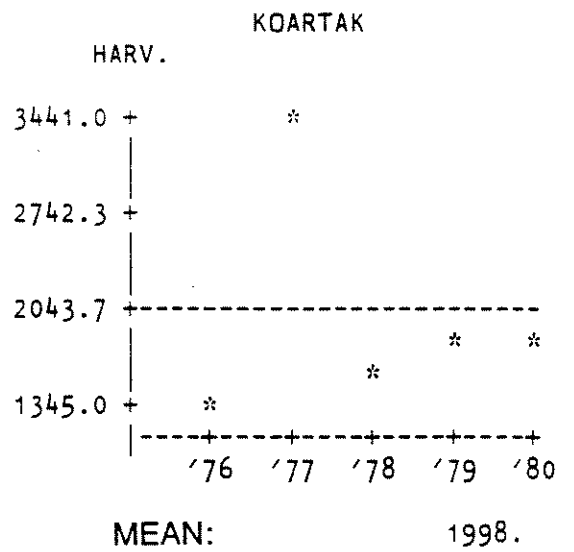
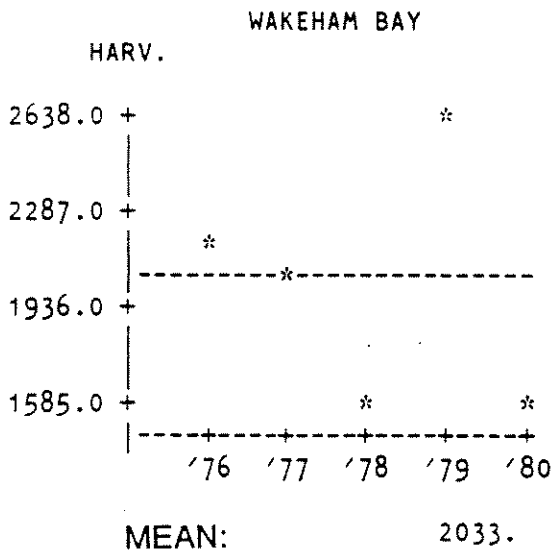
ROCK PTARMIGAN



ROCK PTARMIGAN

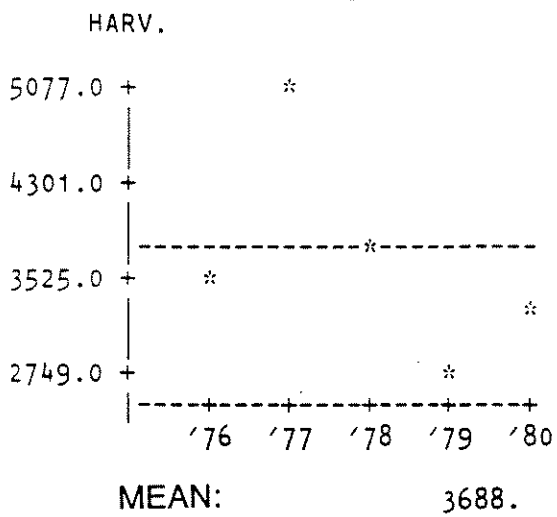


ROCK PTARMIGAN

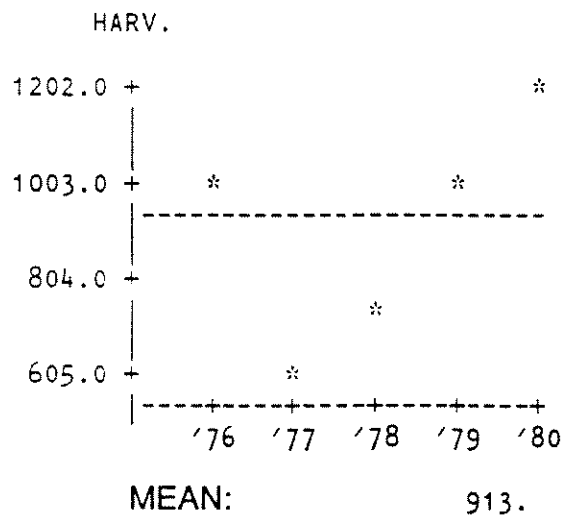


ROCK PTARMIGAN

PAYNE BAY

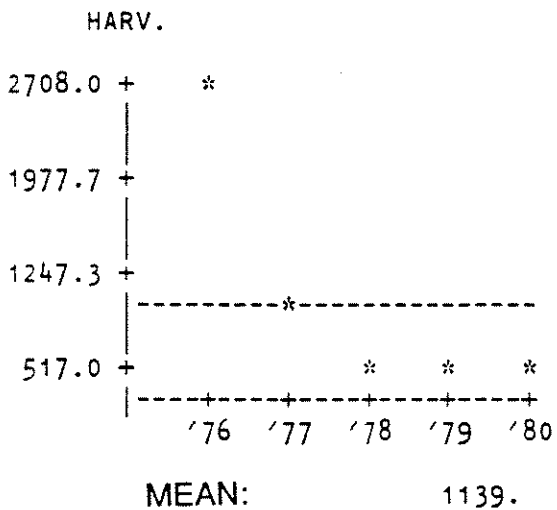


AUPALUK

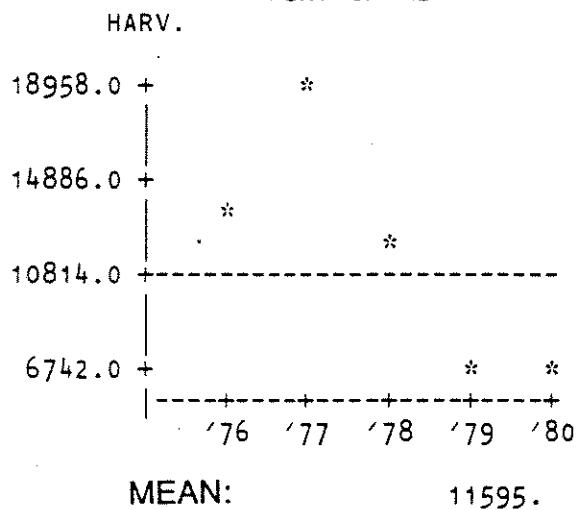


ROCK PTARMIGAN

LEAF BAY

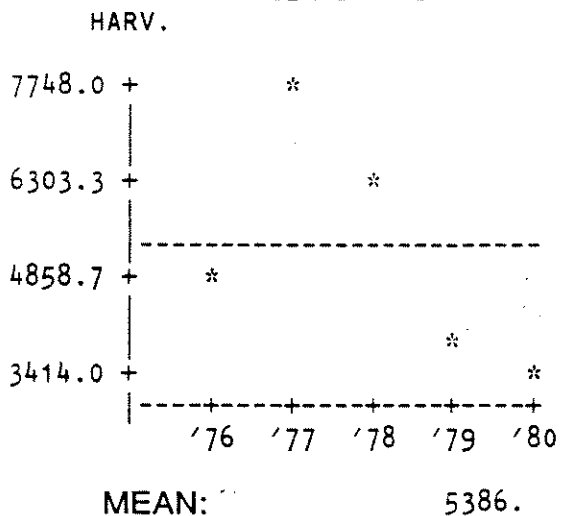


FORT CHIMO

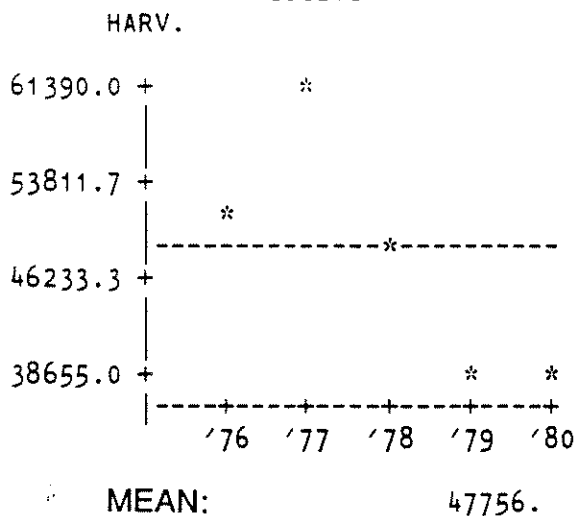


ROCK PTARMIGAN

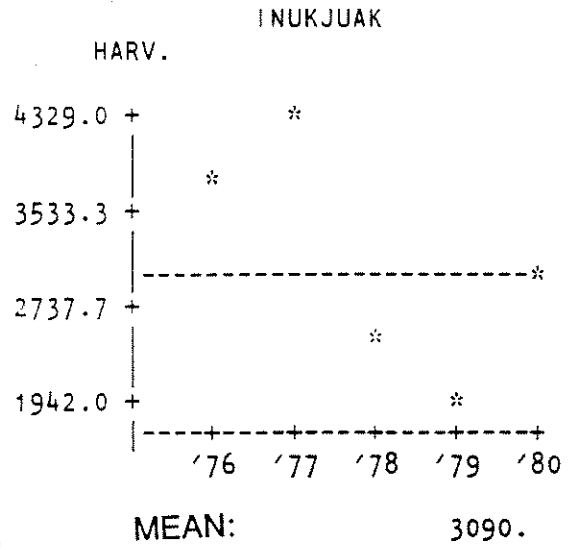
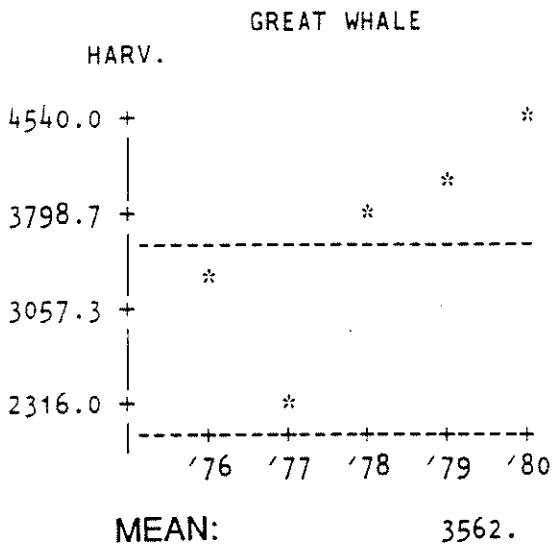
GEORGE RIVER



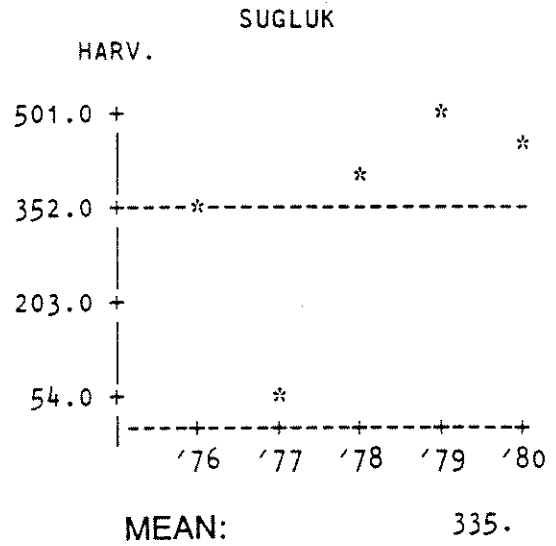
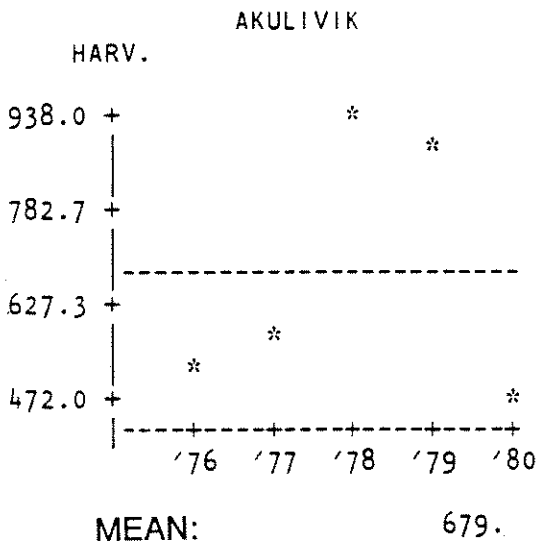
totals



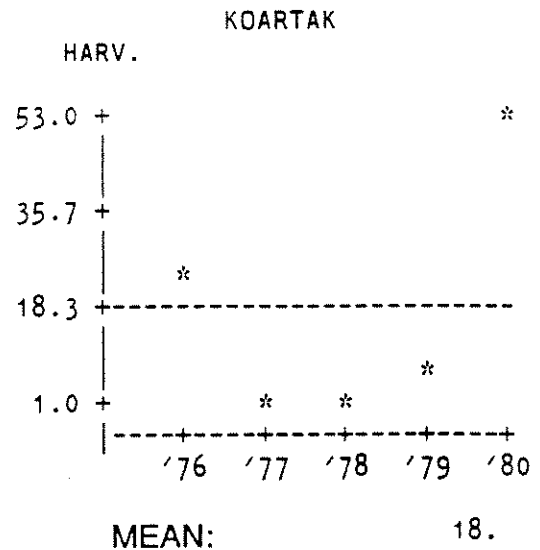
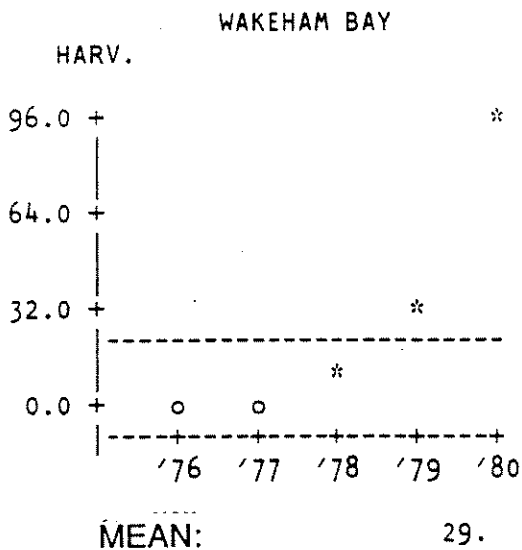
WILLOW PTARMIGAN



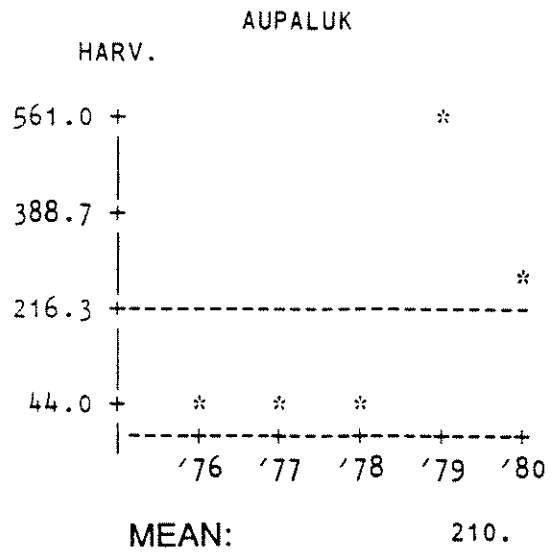
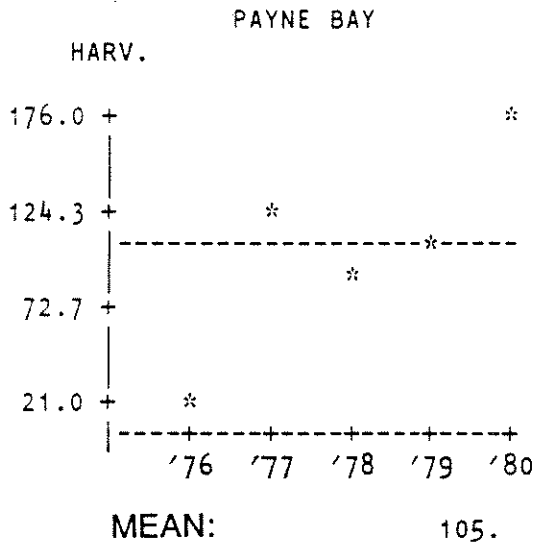
WILLOW PTARMIGAN



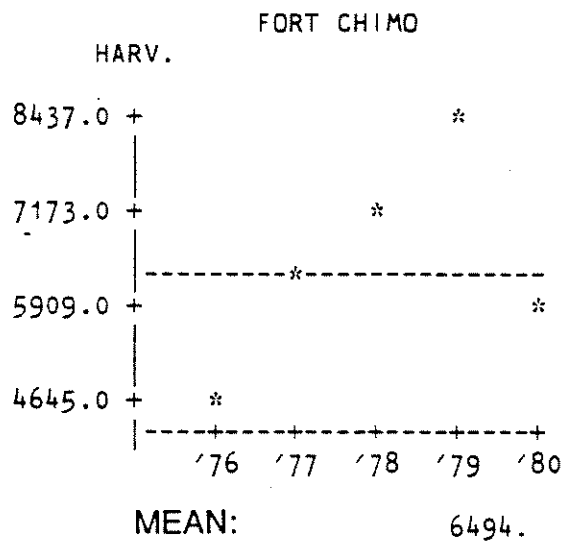
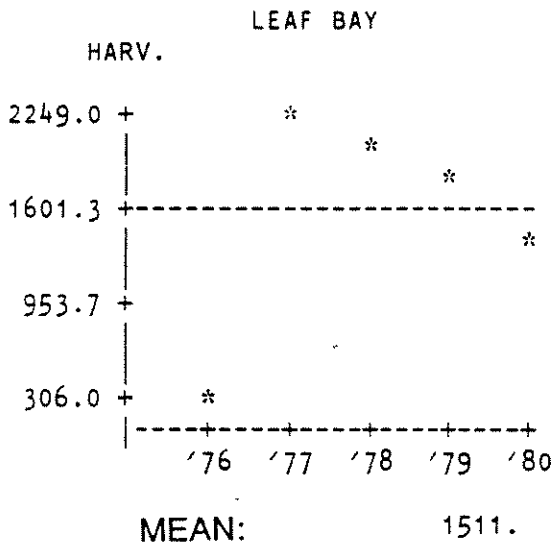
WILLOW PTARMIGAN



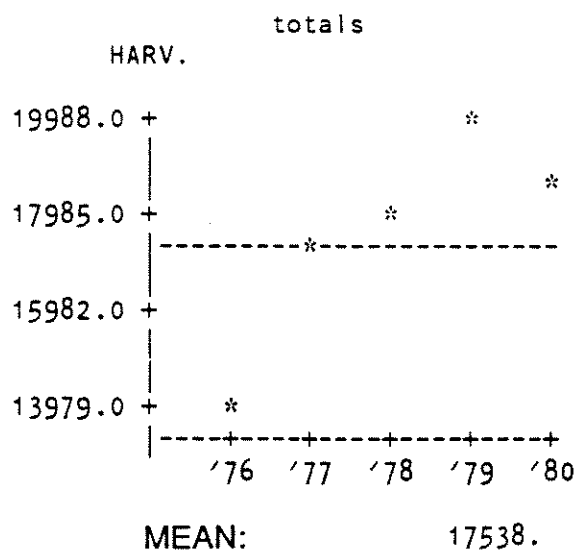
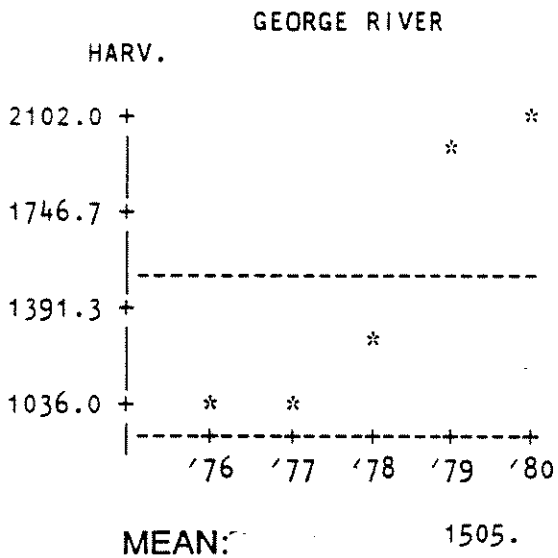
WILLOW PTARMIGAN



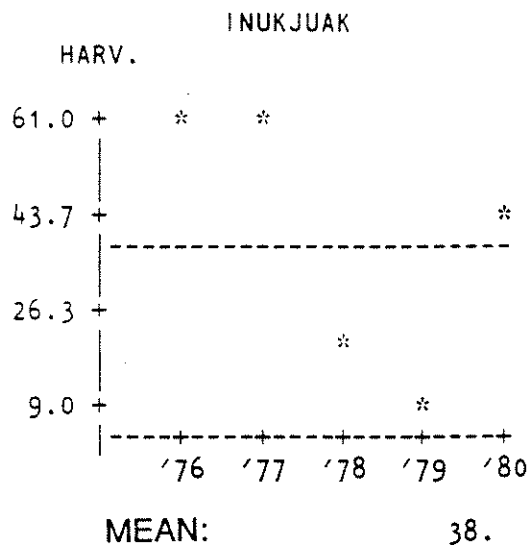
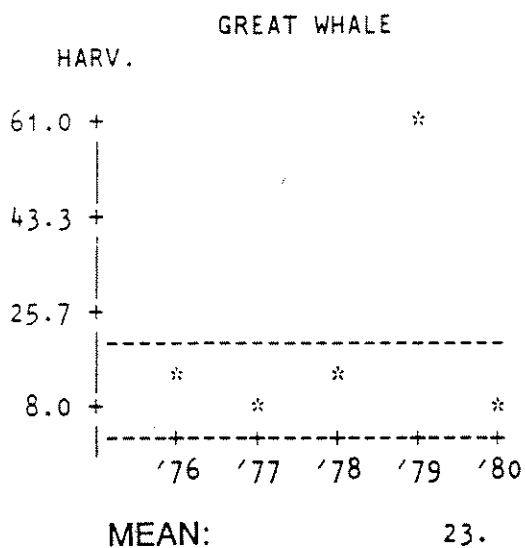
WILLOW PTARMIGAN



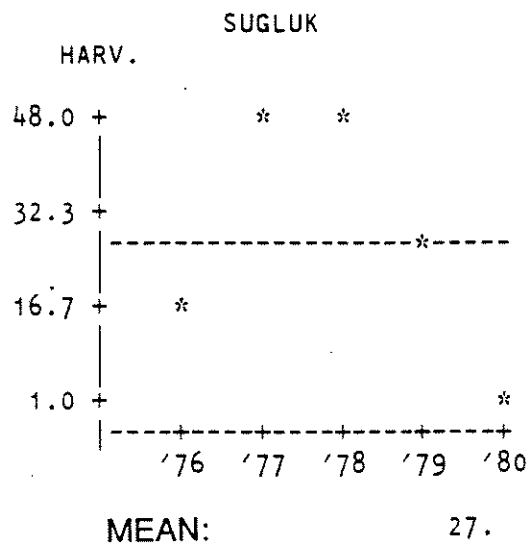
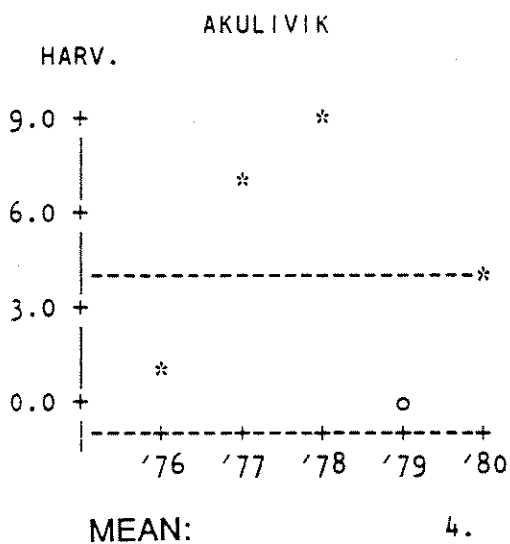
WILLOW PTARMIGAN



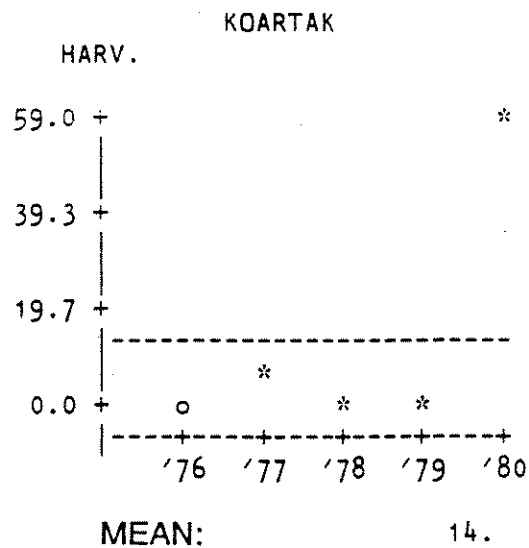
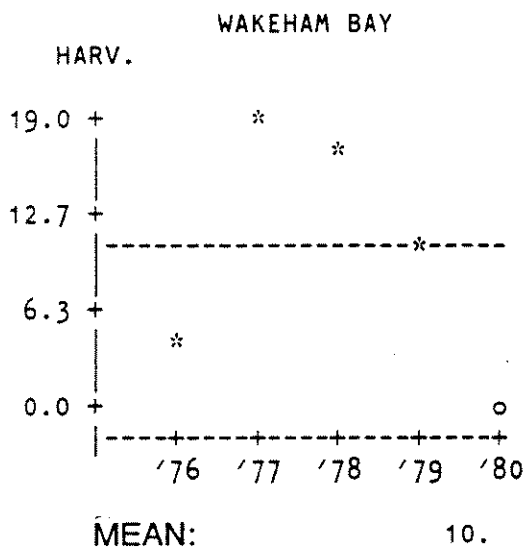
SNOWY OWL



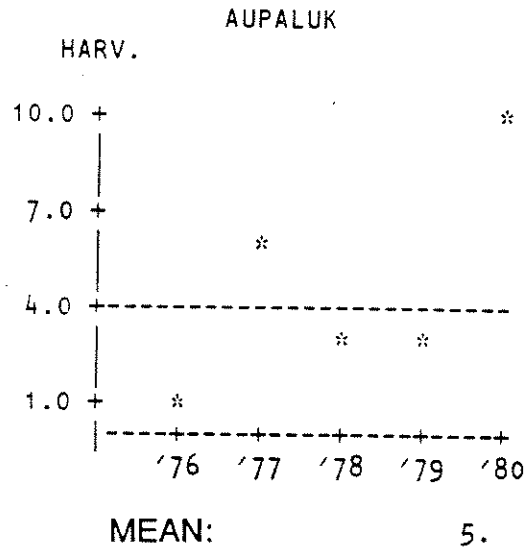
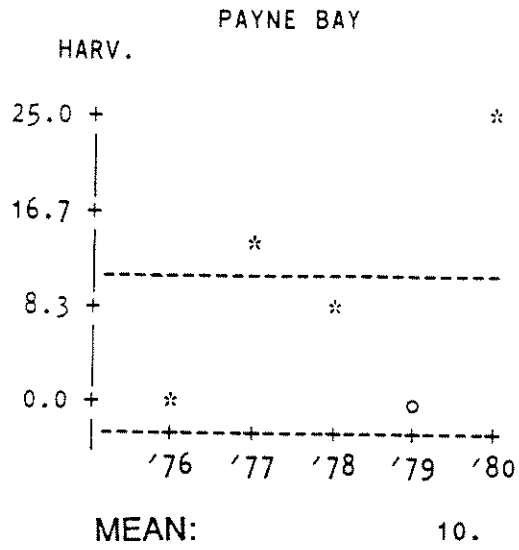
SNOWY OWL



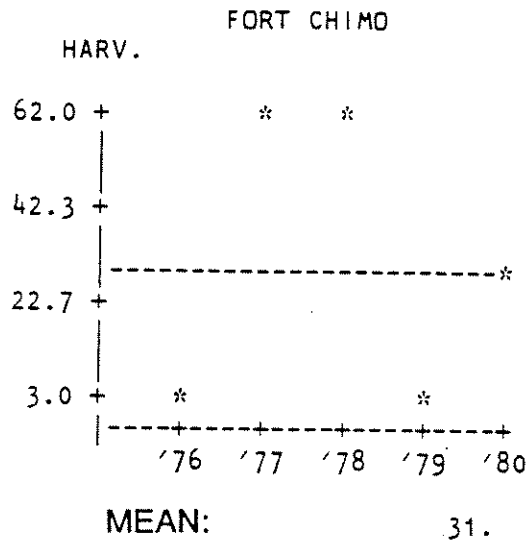
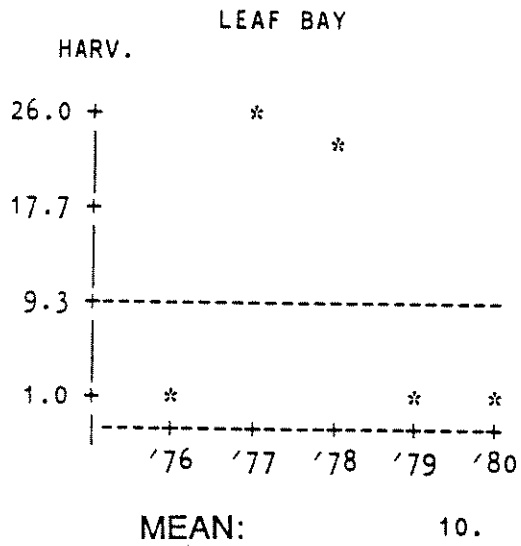
SNOWY OWL



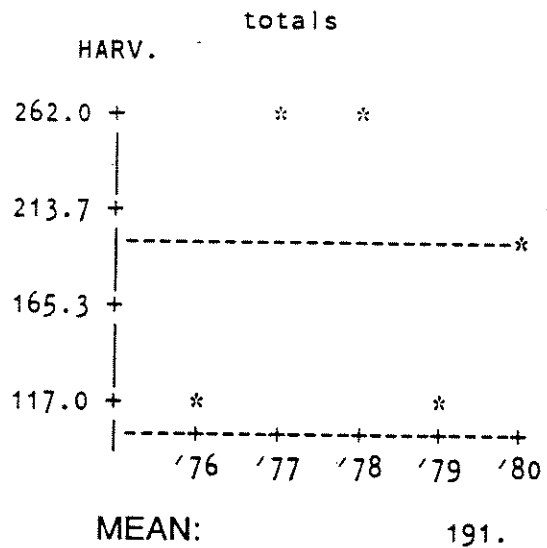
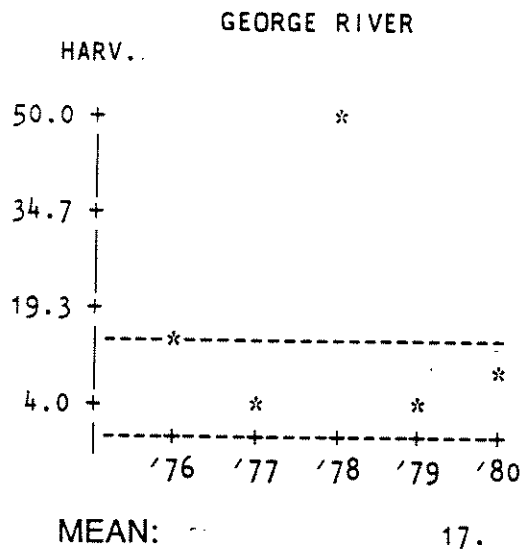
SNOWY OWL



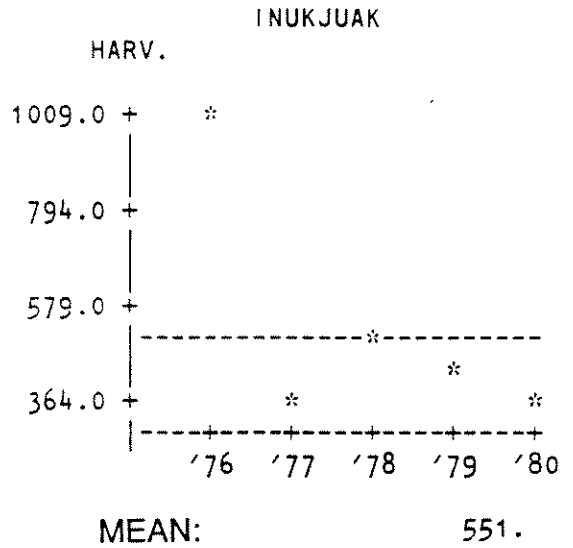
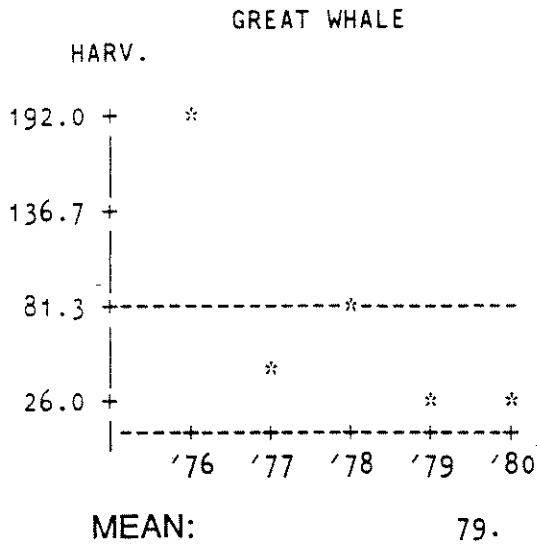
SNOWY OWL



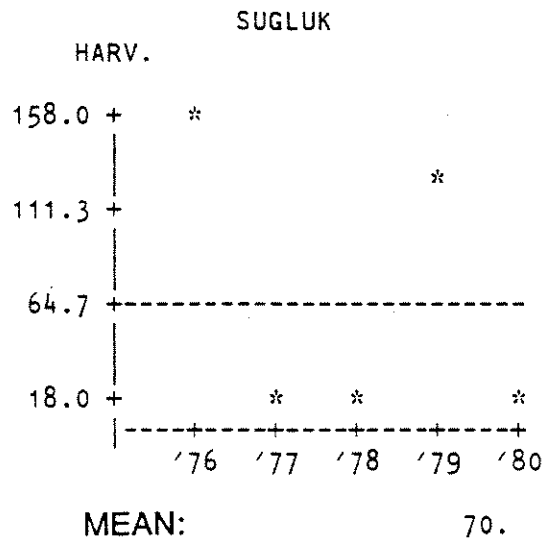
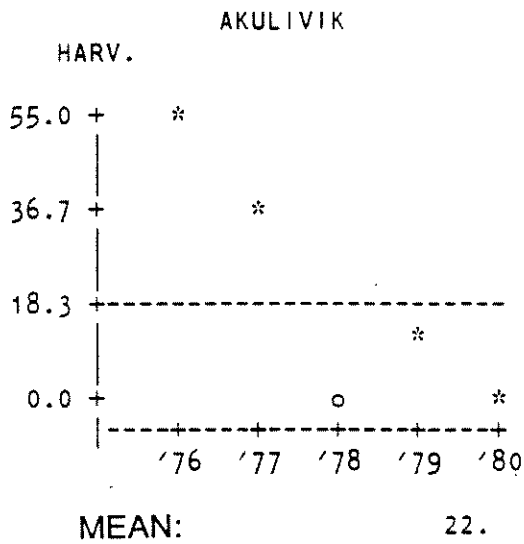
SNOWY OWL



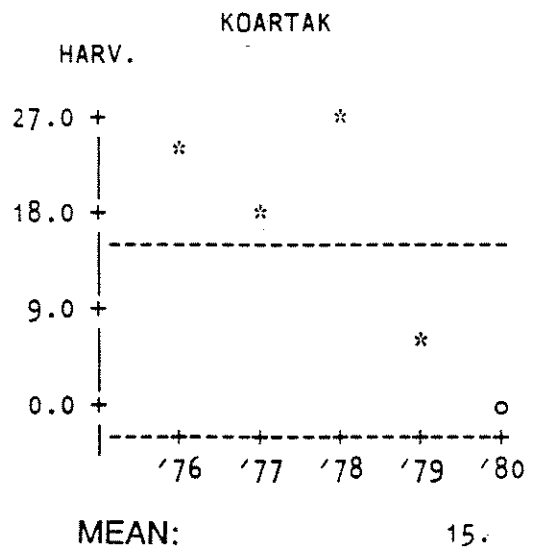
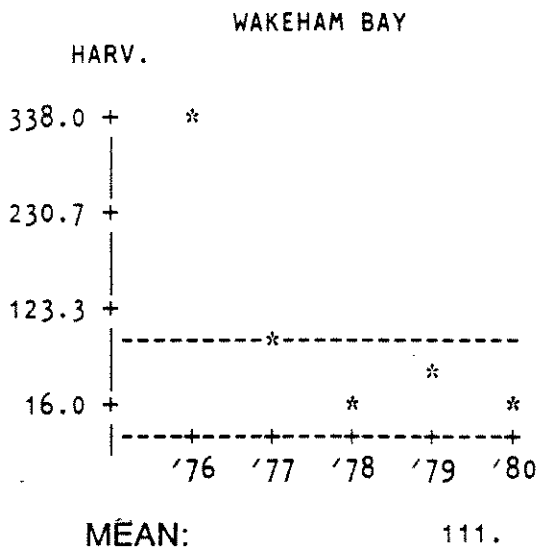
GUILLEMOT



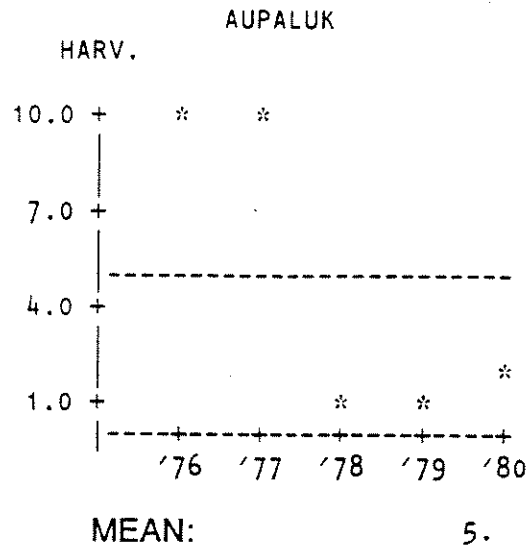
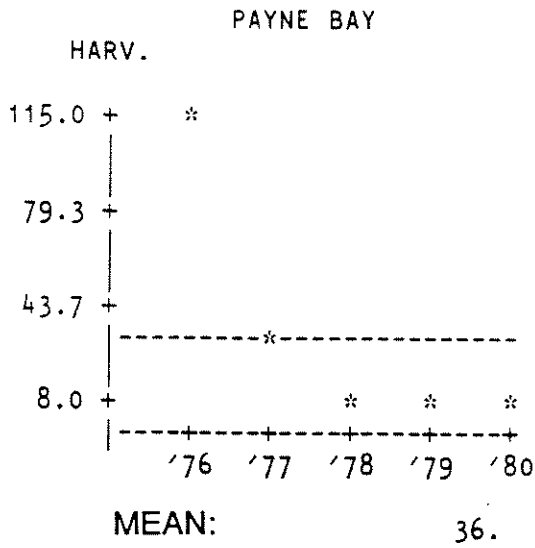
GUILLEMOT



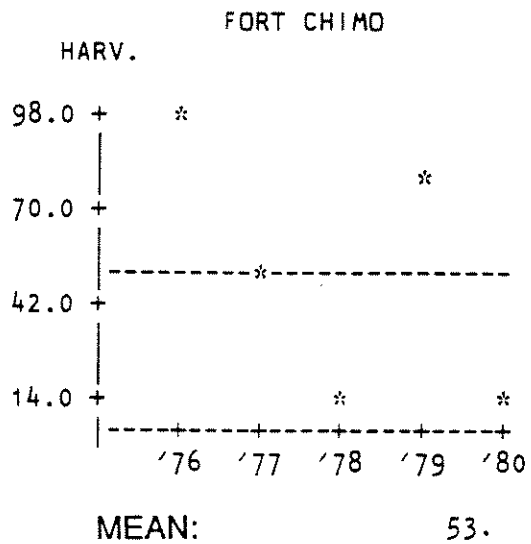
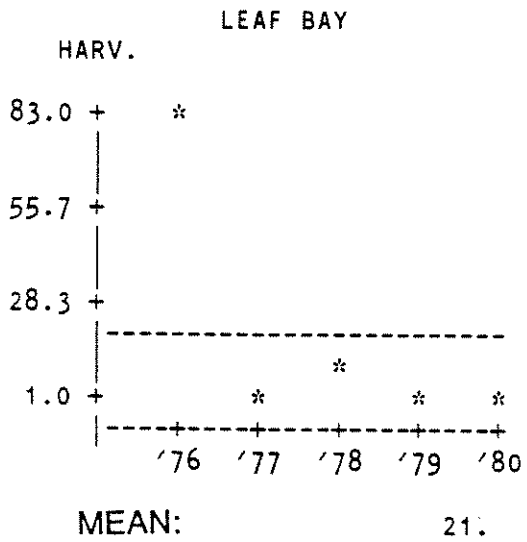
GUILLEMOT



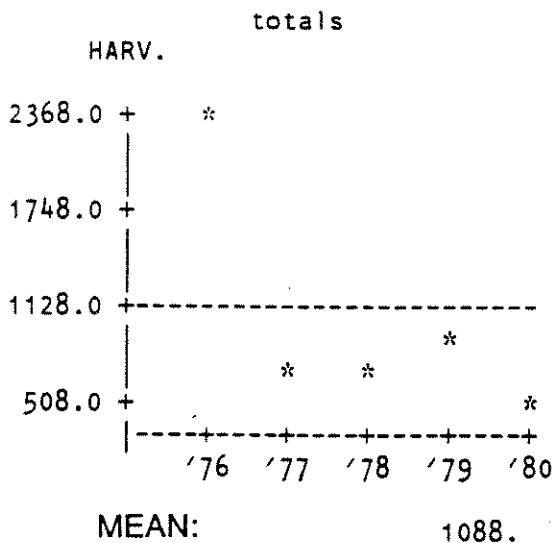
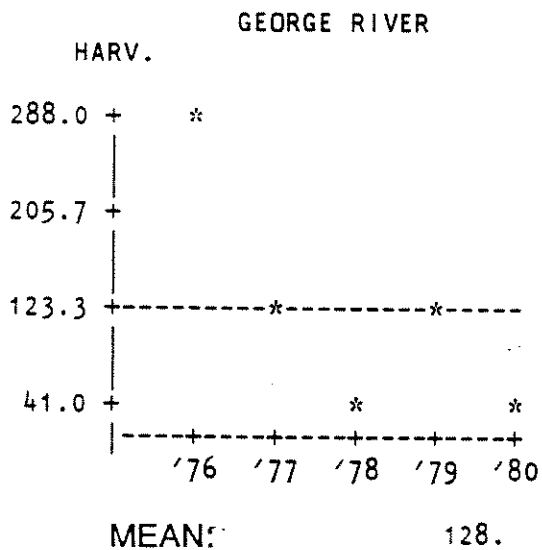
GUILLEMOT



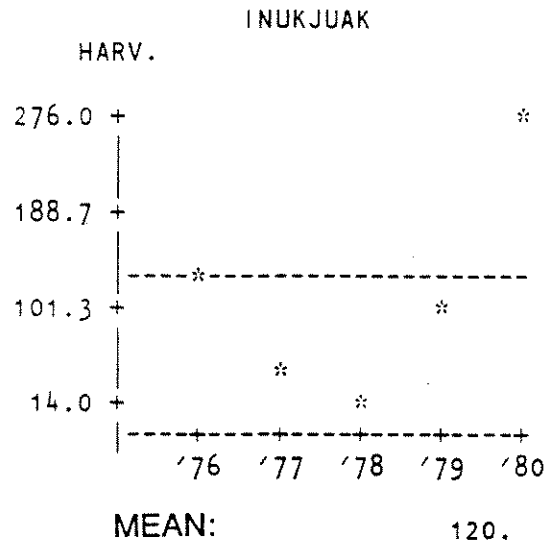
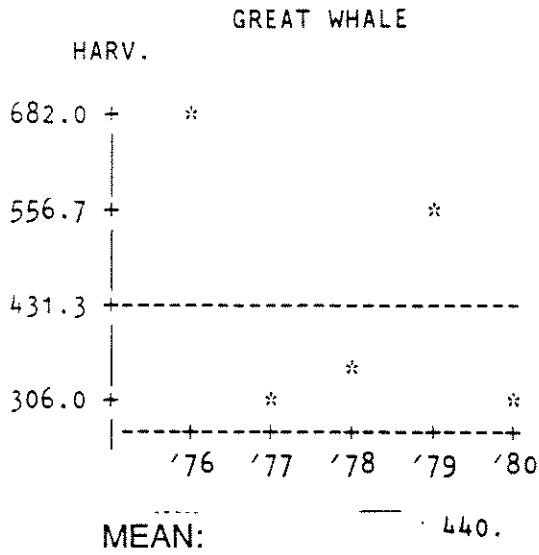
GUILLEMOT



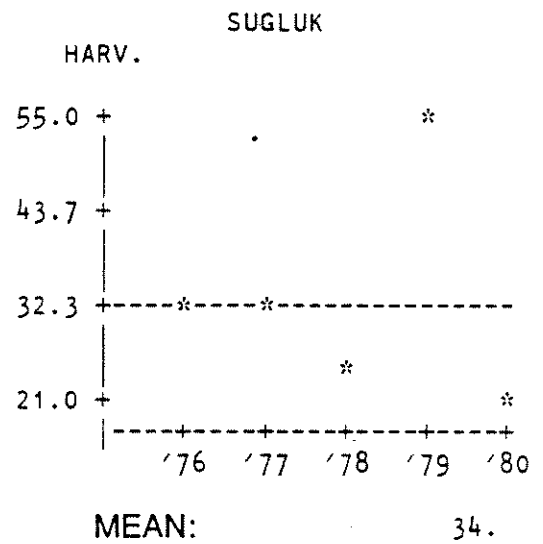
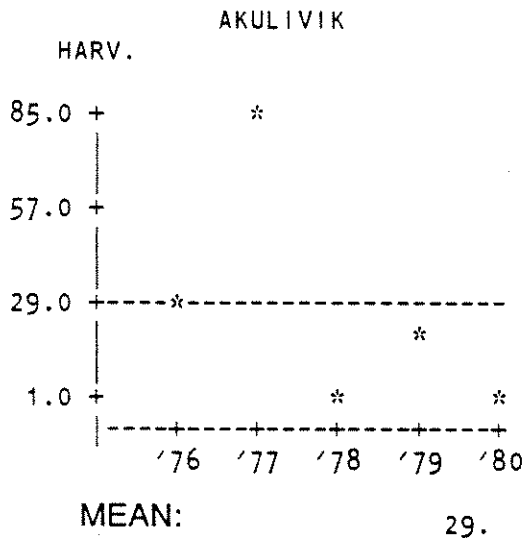
GUILLEMOT



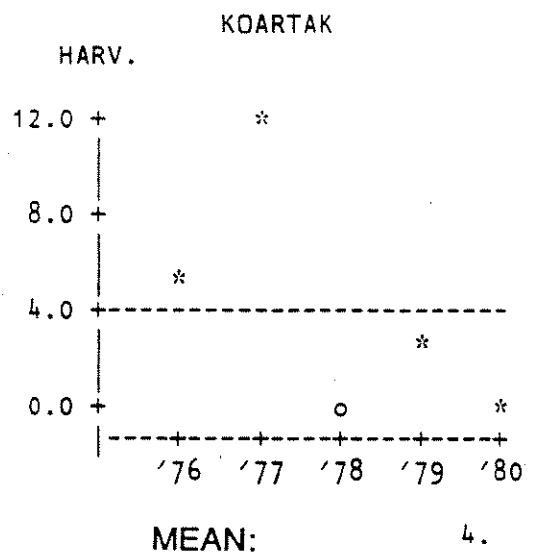
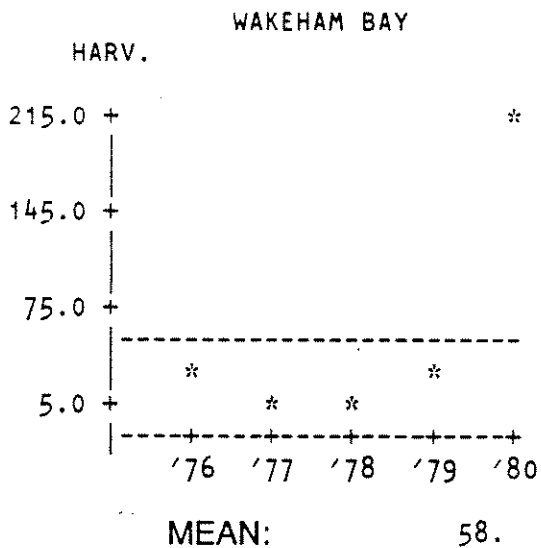
LOONS



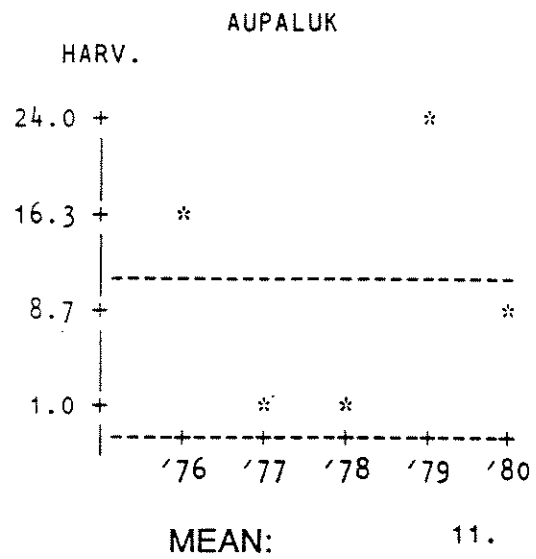
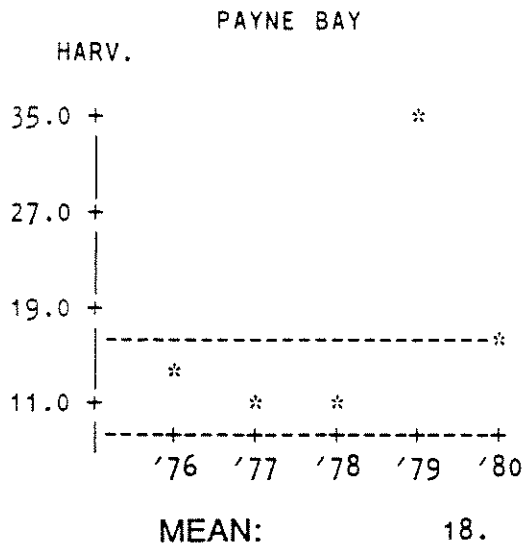
LOONS



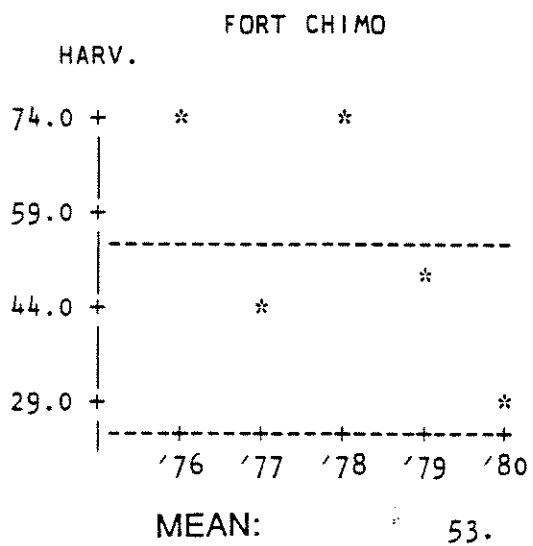
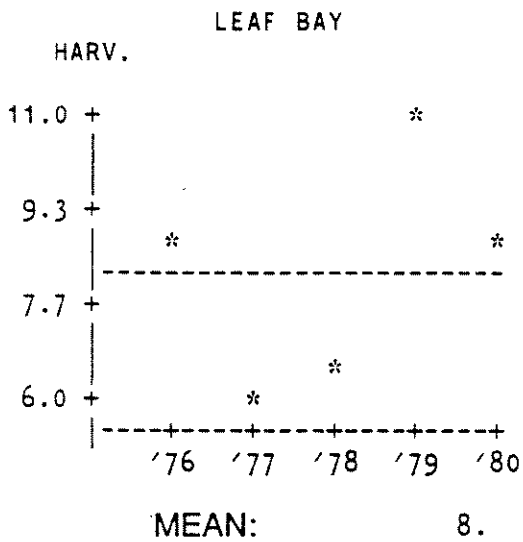
LOONS



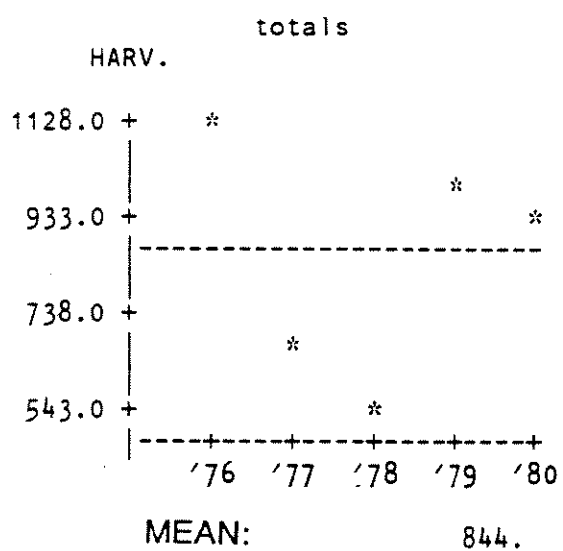
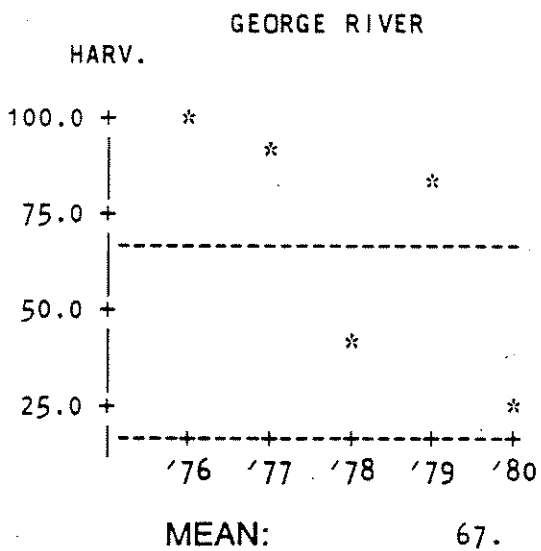
LOONS



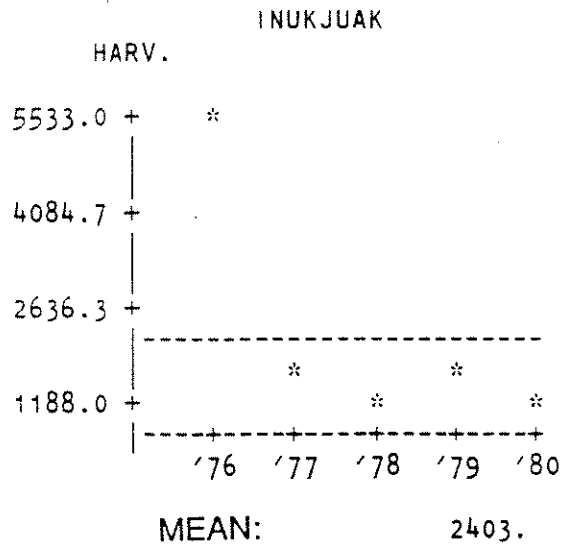
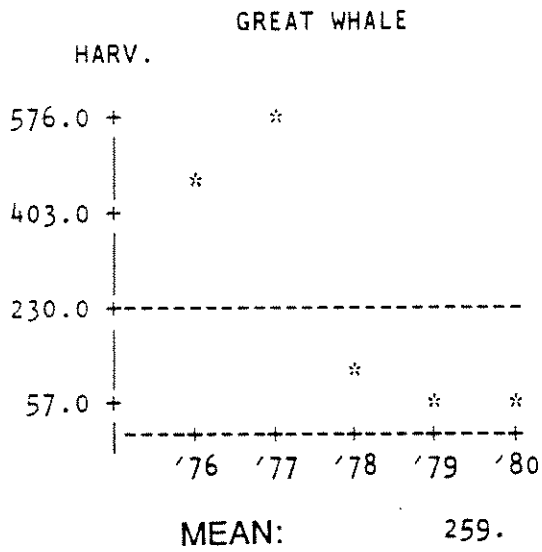
LOONS



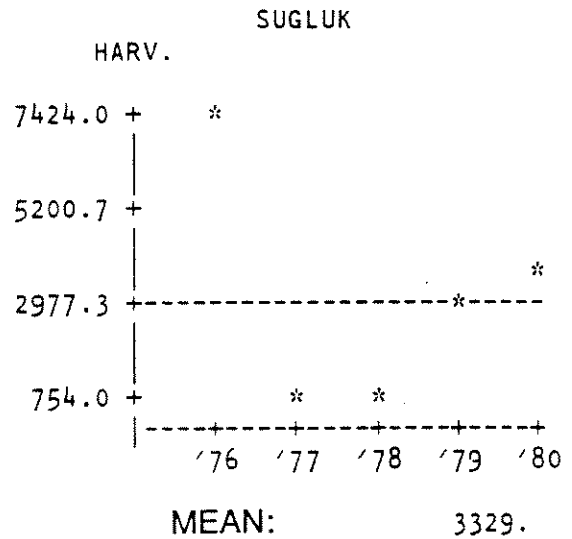
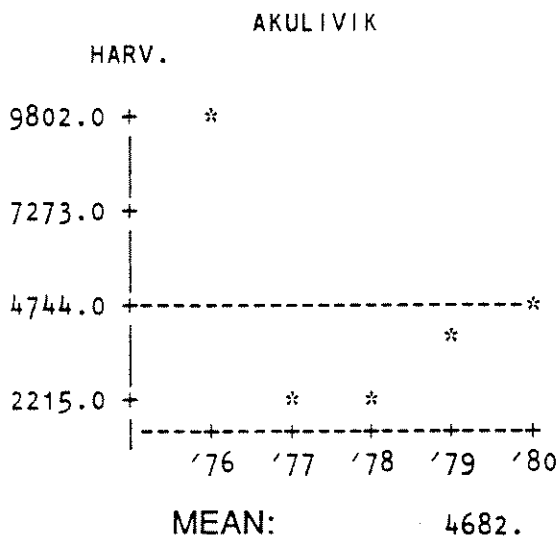
LOONS



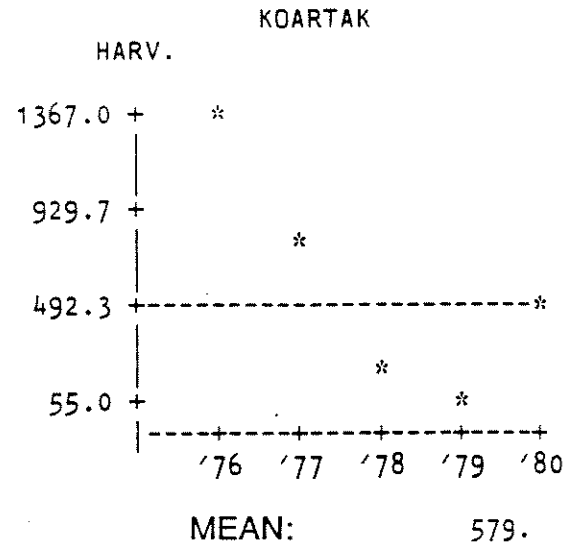
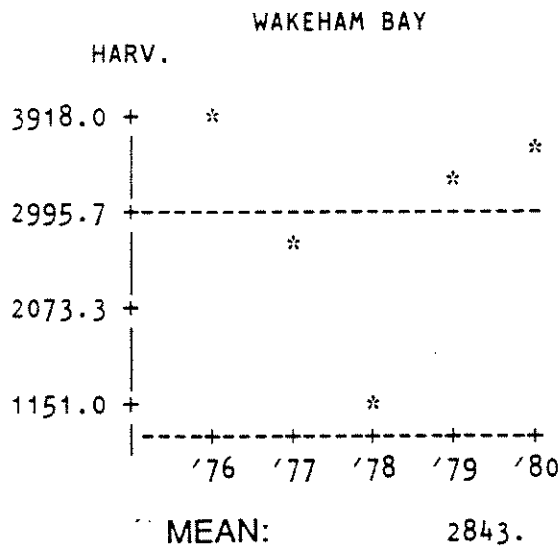
ARCTIC CHAR, WINTER



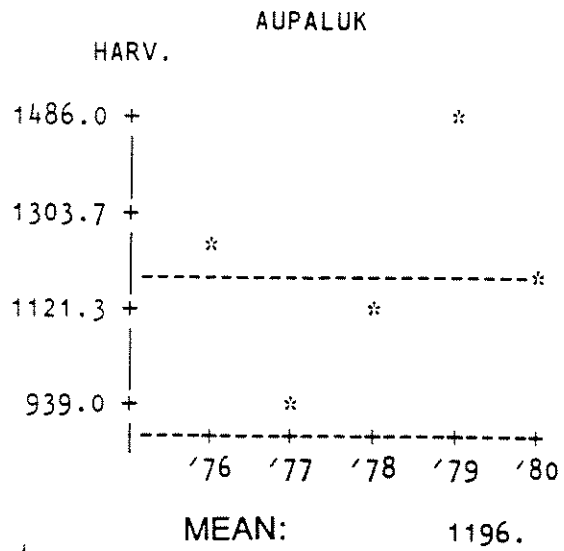
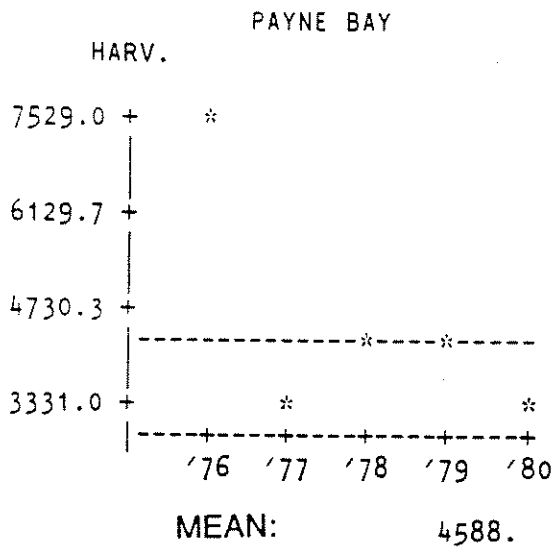
ARCTIC CHAR, WINTER



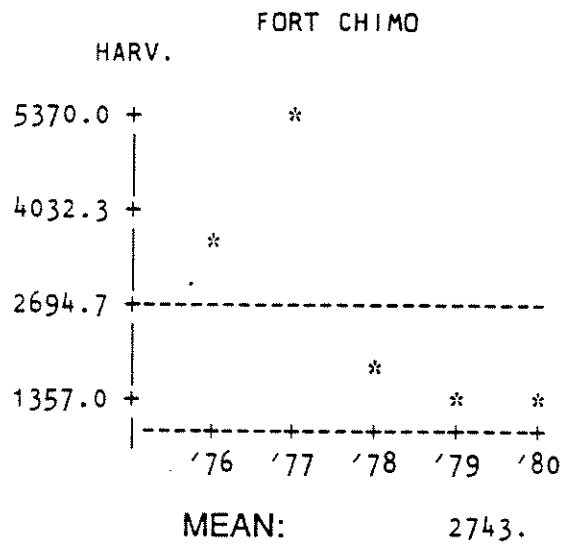
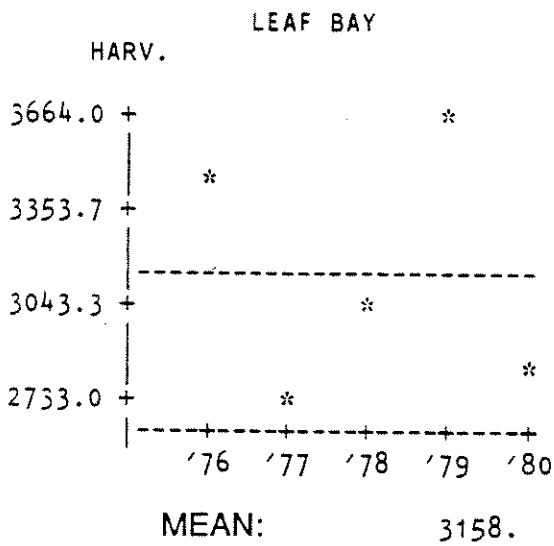
ARCTIC CHAR, WINTER



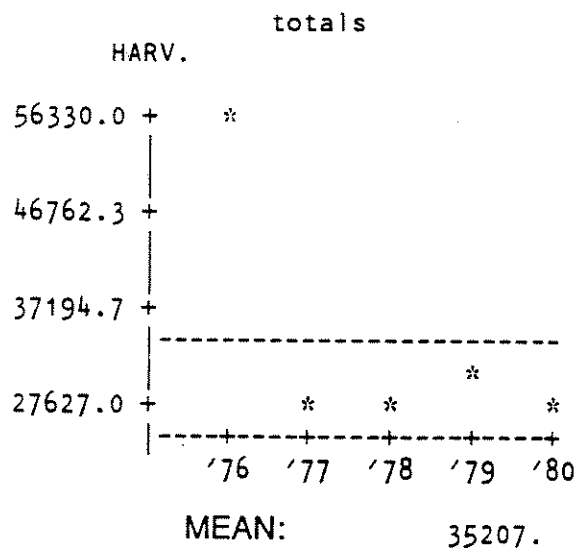
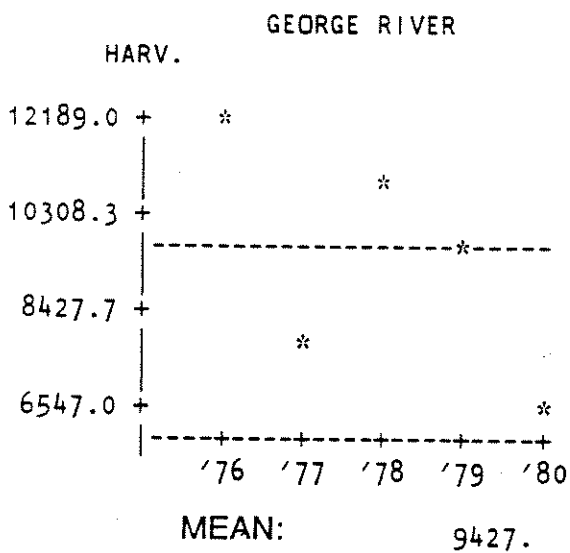
ARCTIC CHAR, WINTER



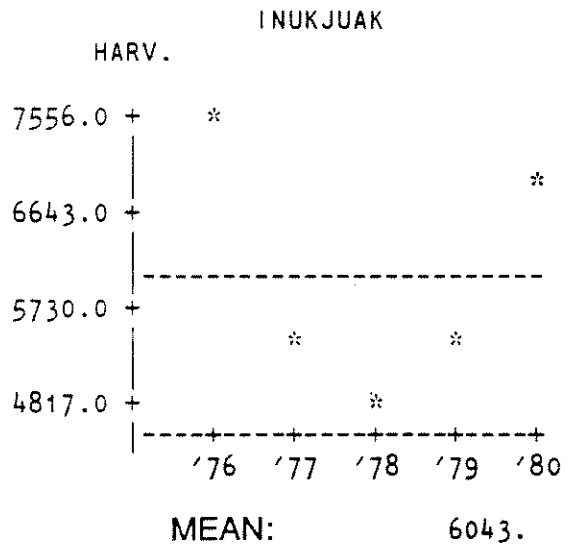
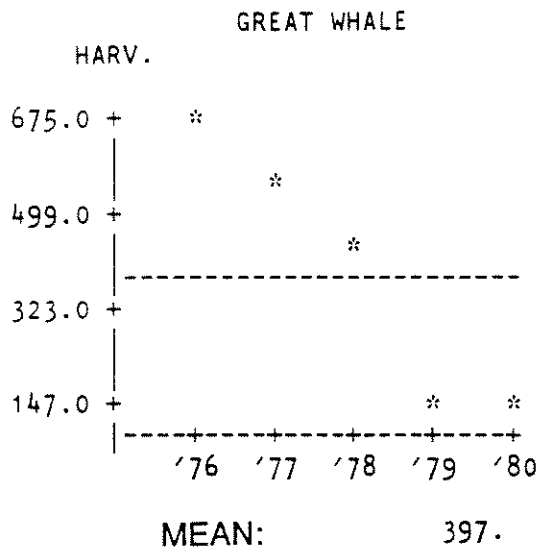
ARCTIC CHAR, WINTER



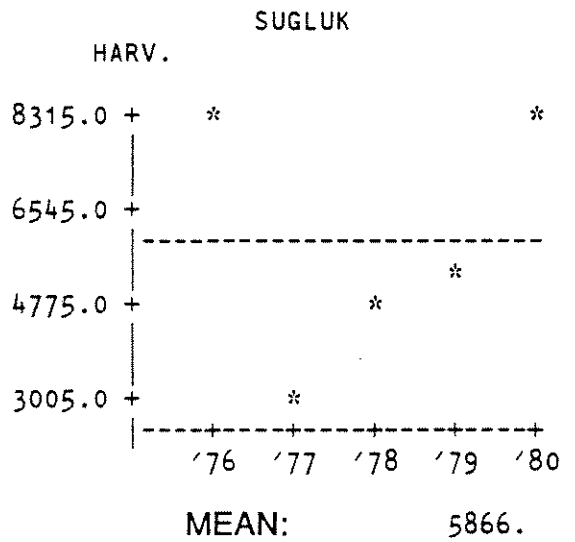
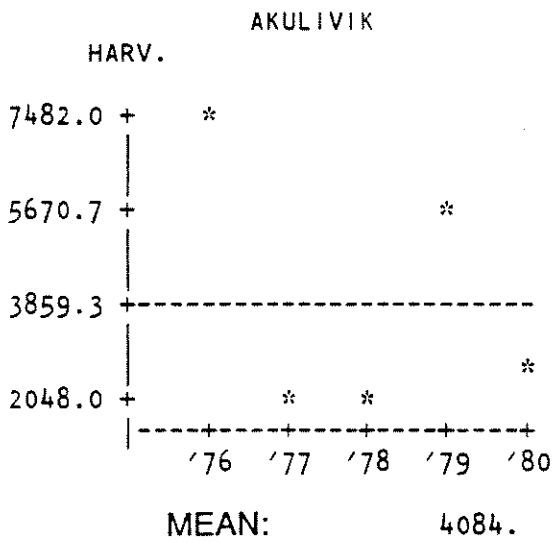
ARCTIC CHAR, WINTER



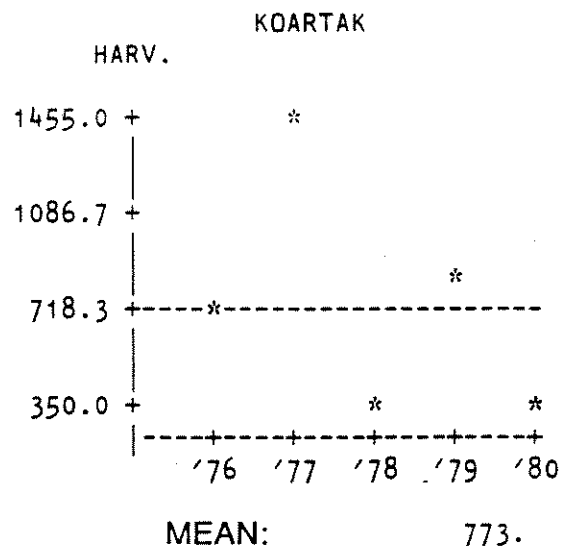
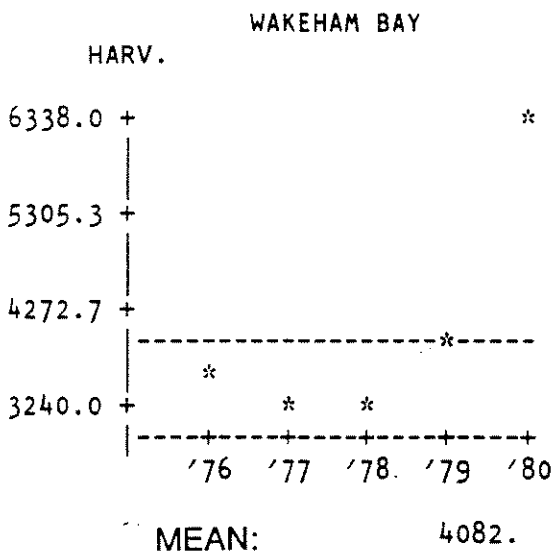
ARCTIC CHAR, SUMMER



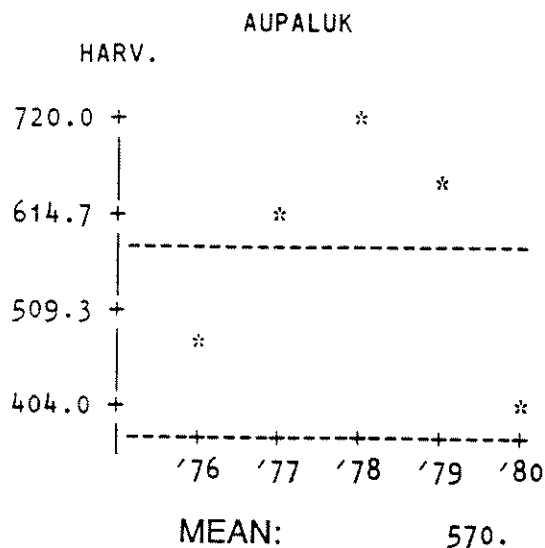
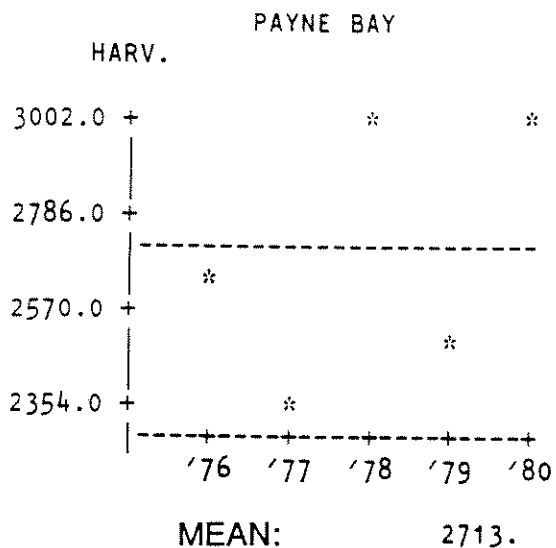
ARCTIC CHAR, SUMMER



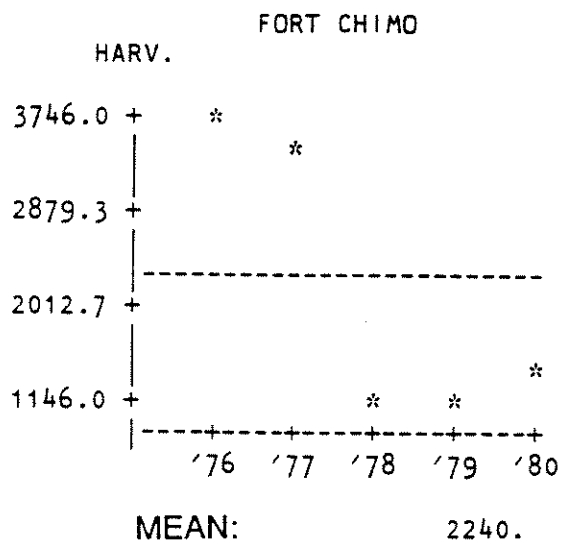
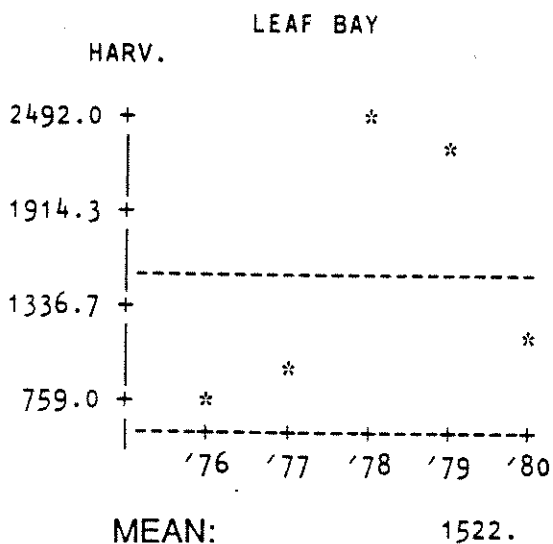
ARCTIC CHAR, SUMMER



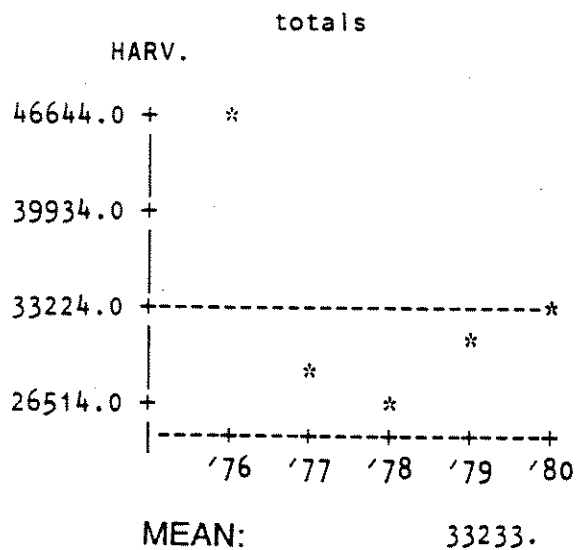
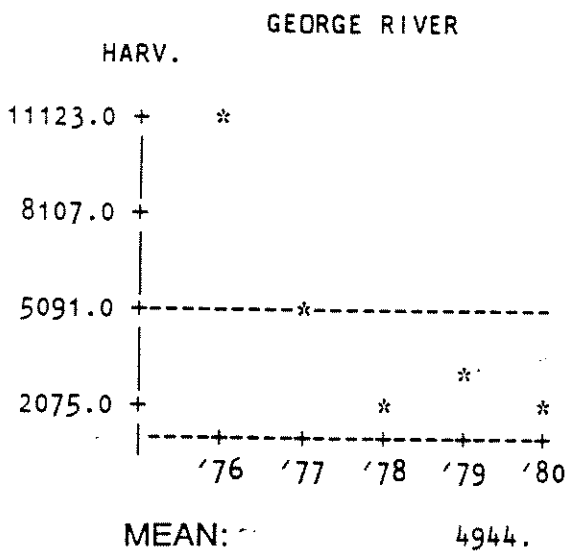
ARCTIC CHAR, SUMMER



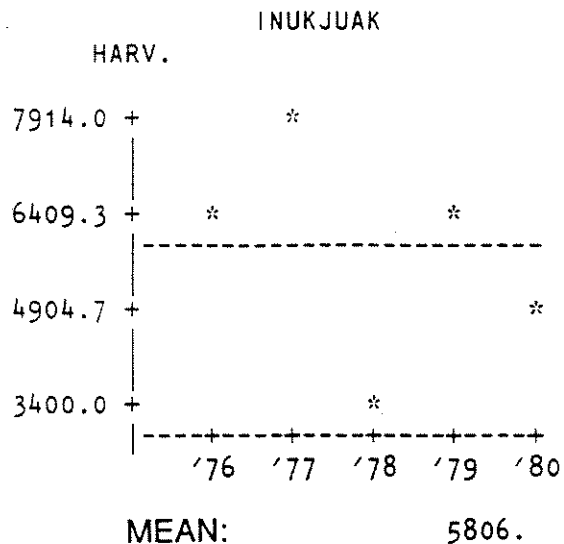
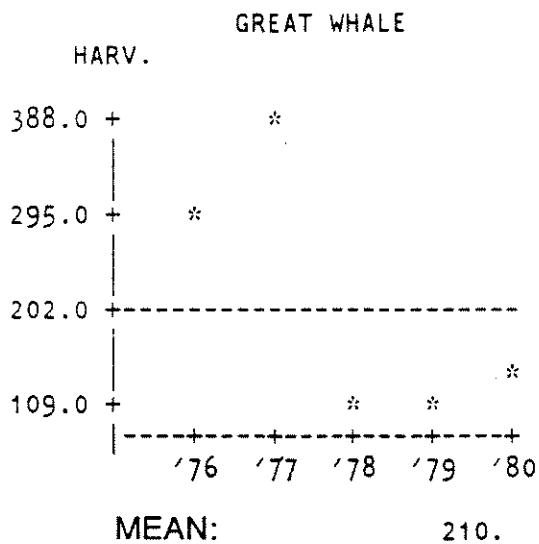
ARCTIC CHAR, SUMMER



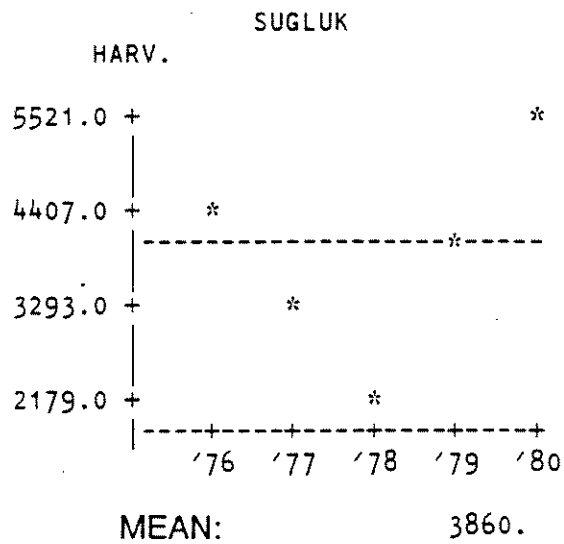
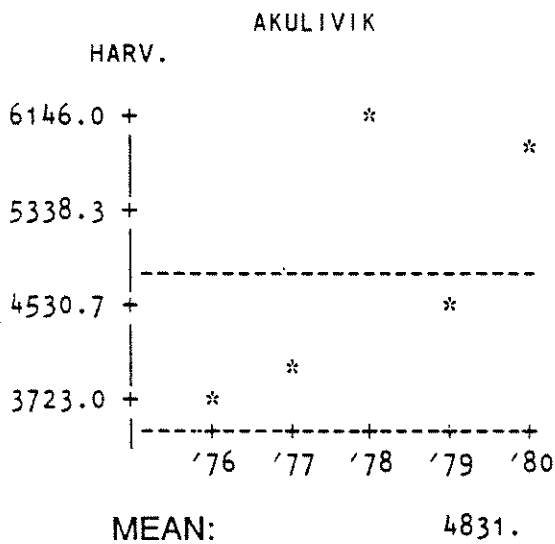
ARCTIC CHAR, SUMMER



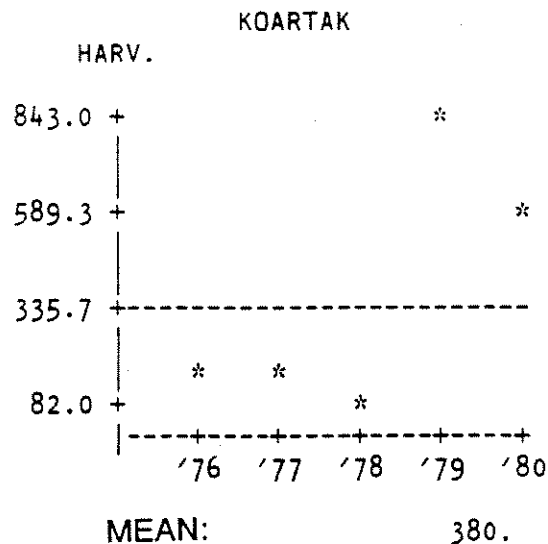
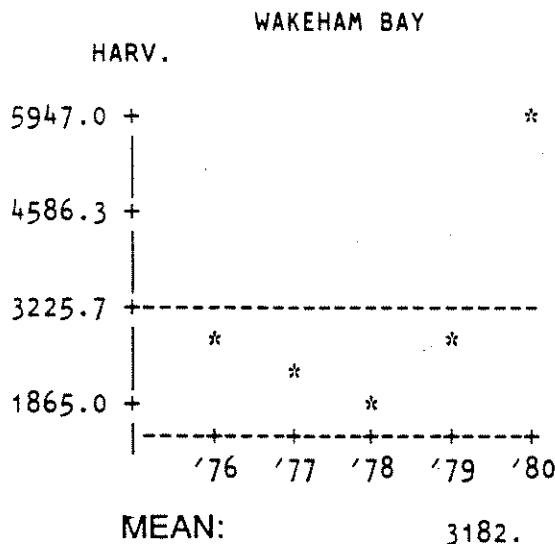
ARCTIC CHAR, FALL



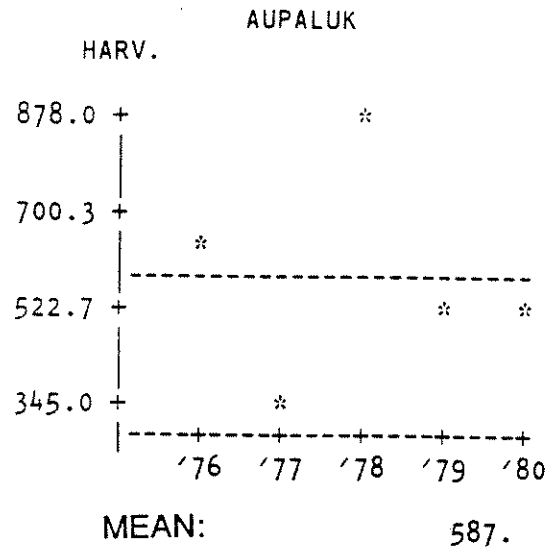
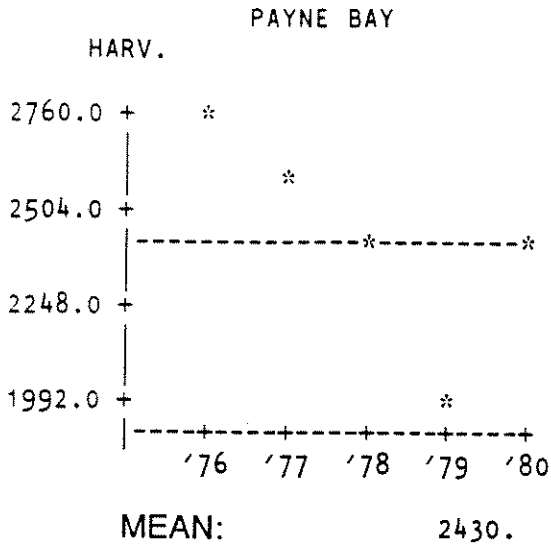
ARCTIC CHAR, FALL



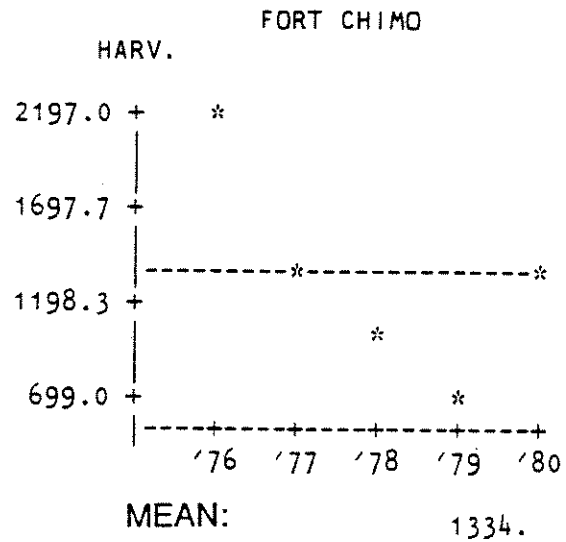
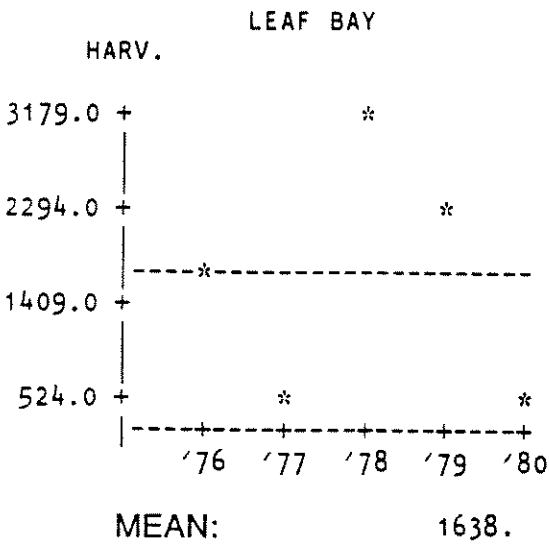
ARCTIC CHAR, FALL



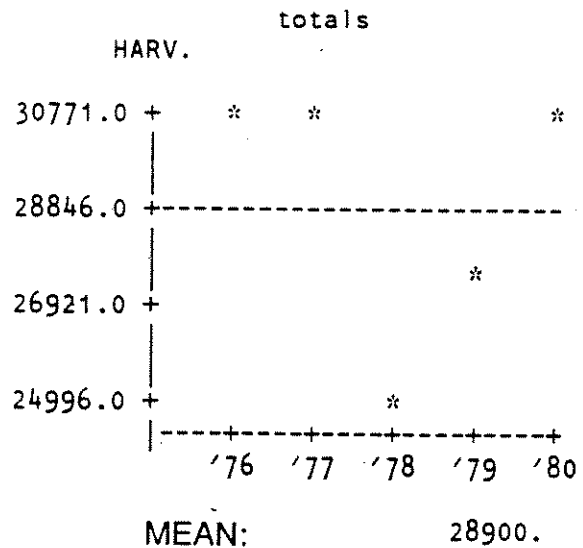
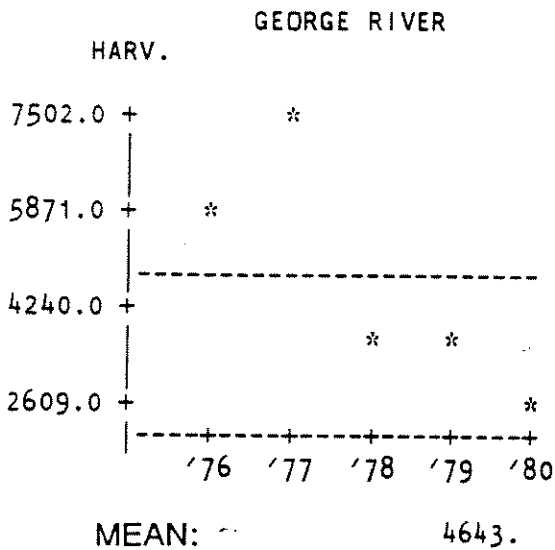
ARCTIC CHAR, FALL



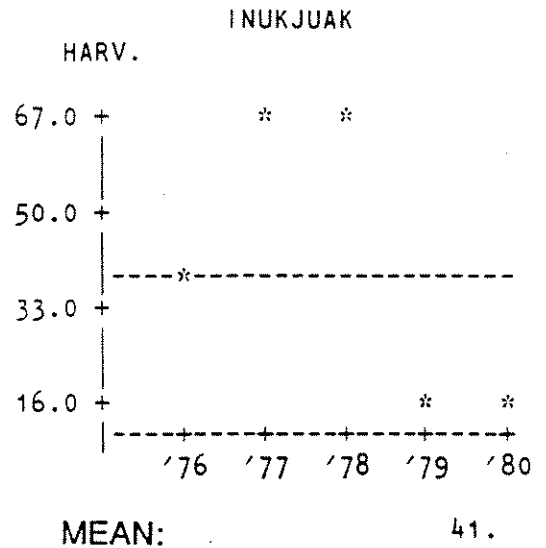
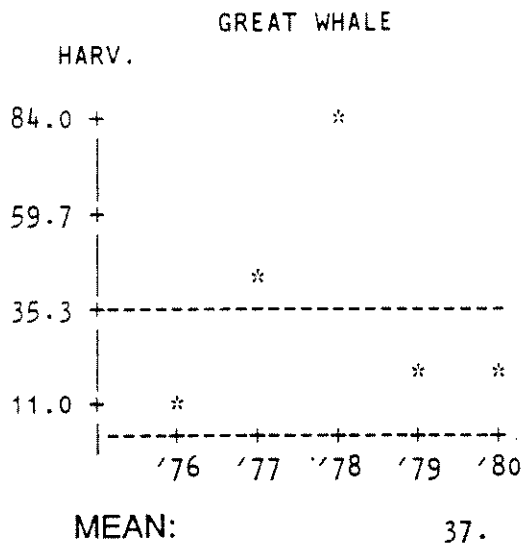
ARCTIC CHAR, FALL



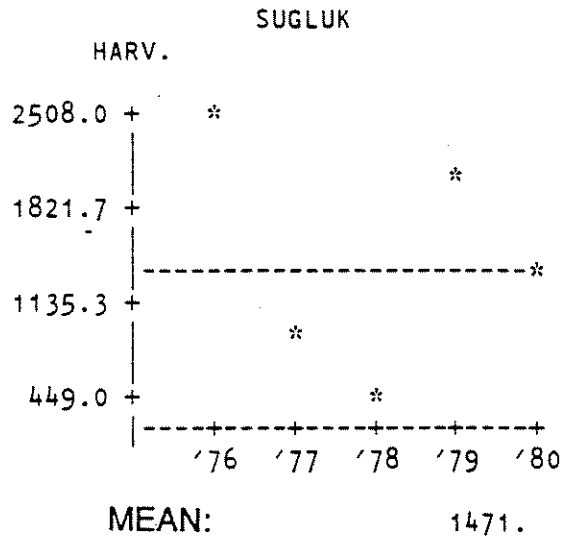
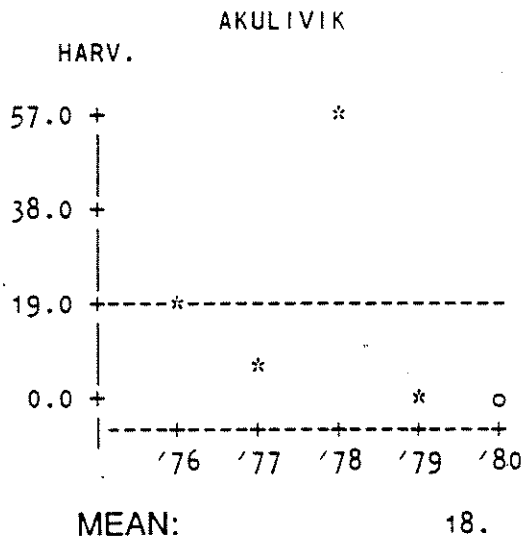
ARCTIC CHAR, FALL



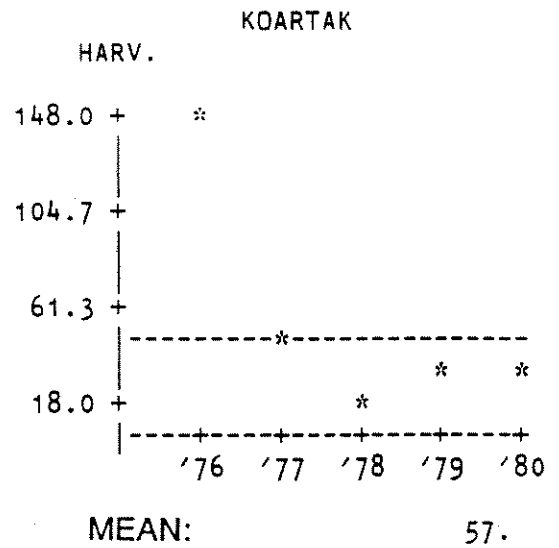
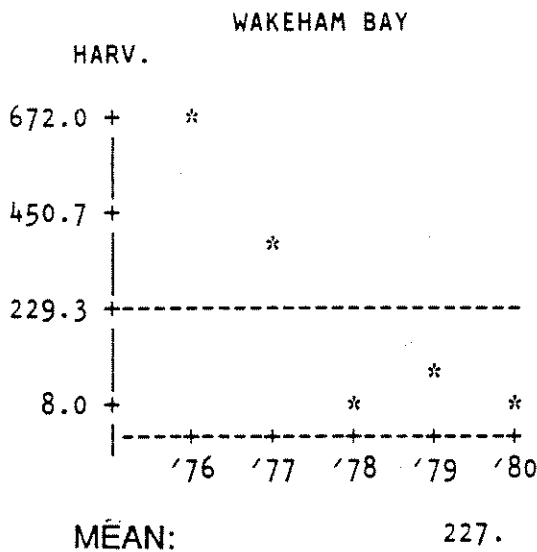
MURRE



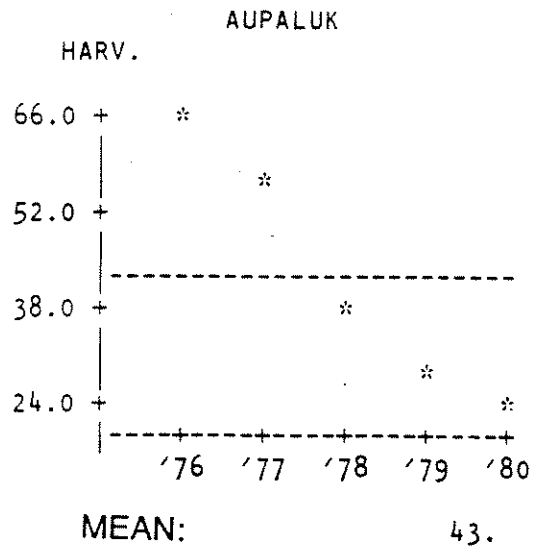
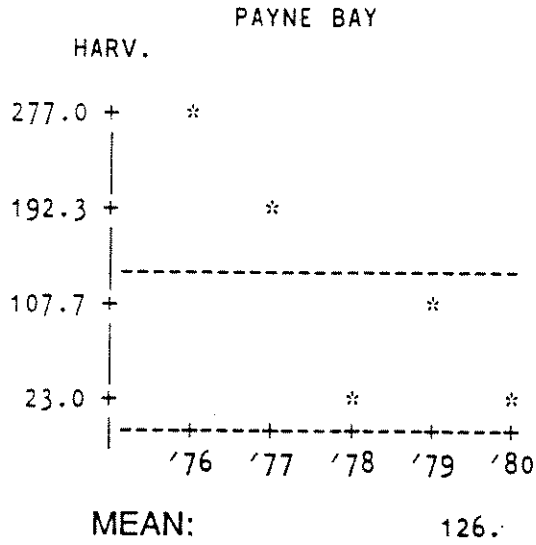
MURRE



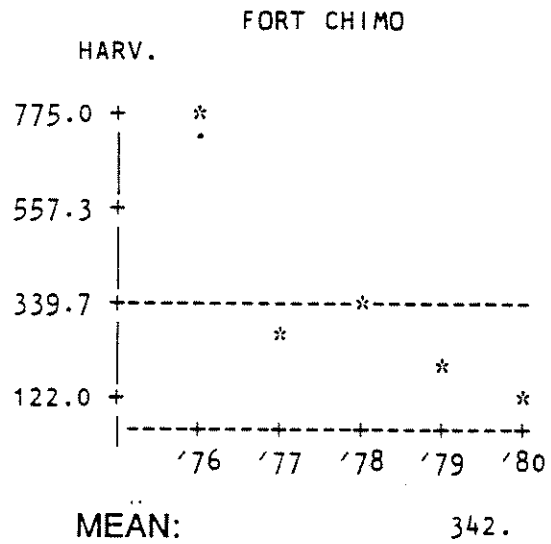
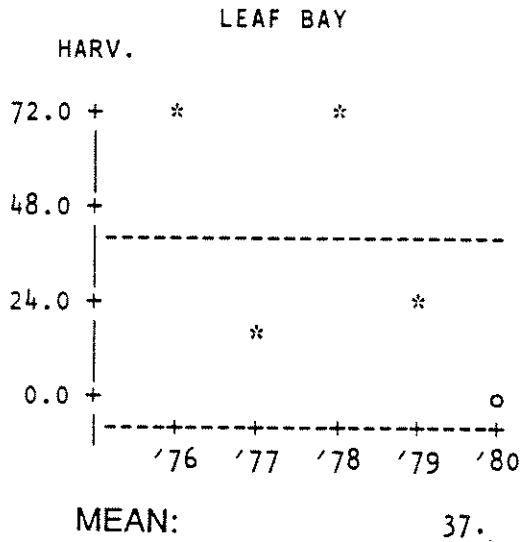
MURRE



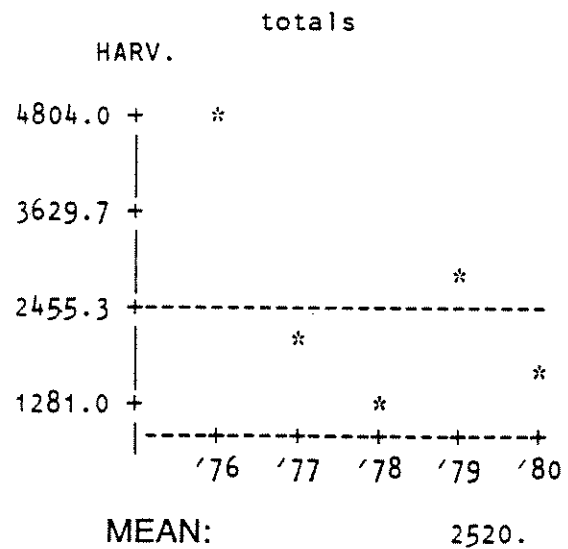
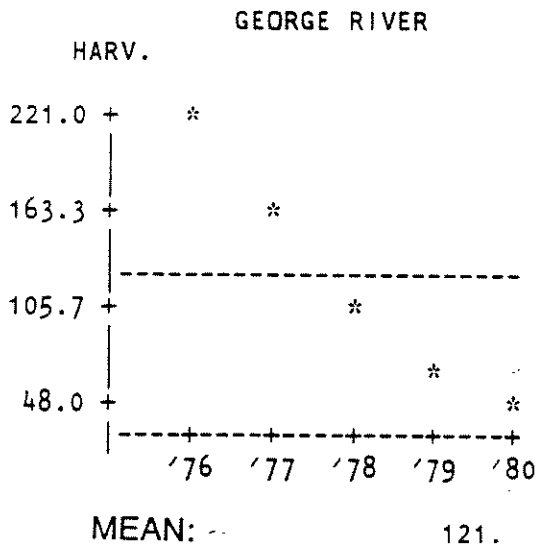
MURRE



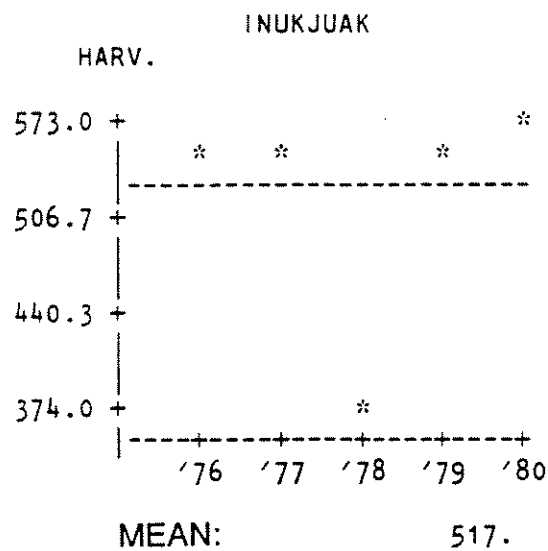
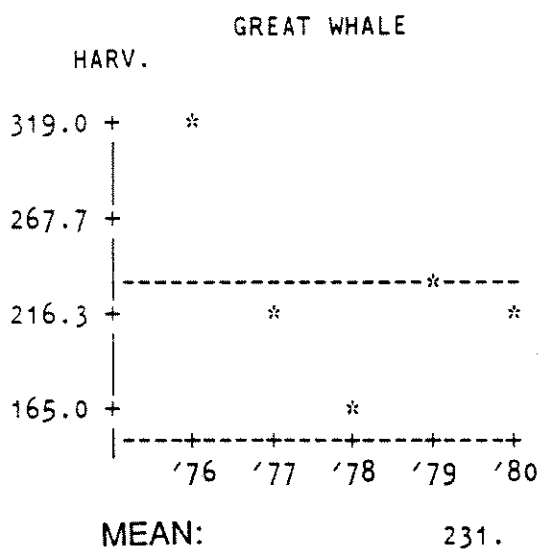
MURRE



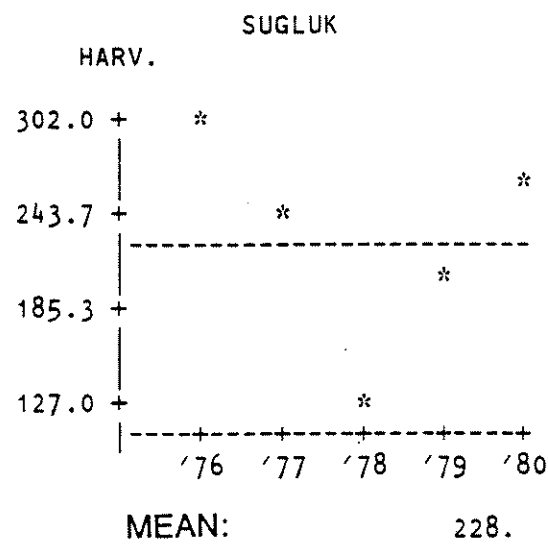
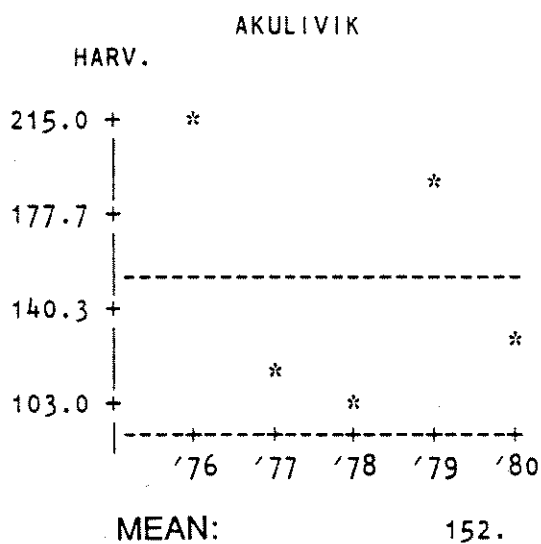
MURRE



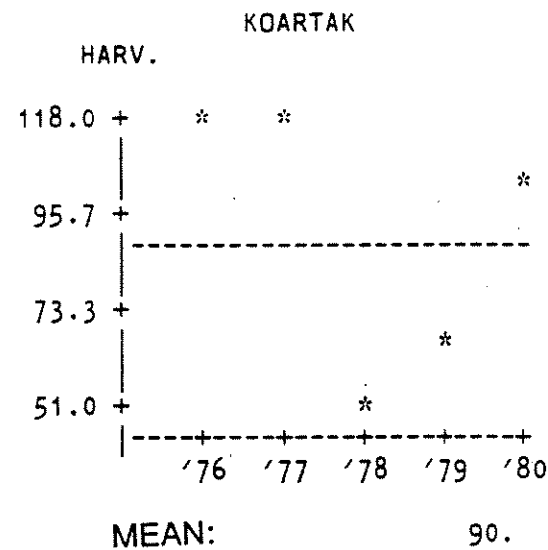
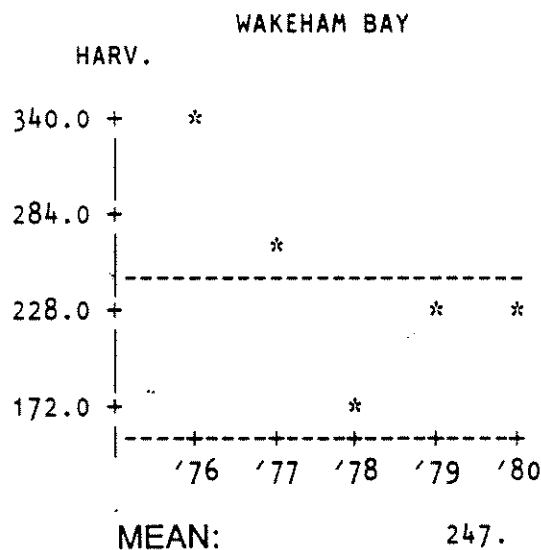
TOTAL FOOD WEIGHT (1000 lb.)



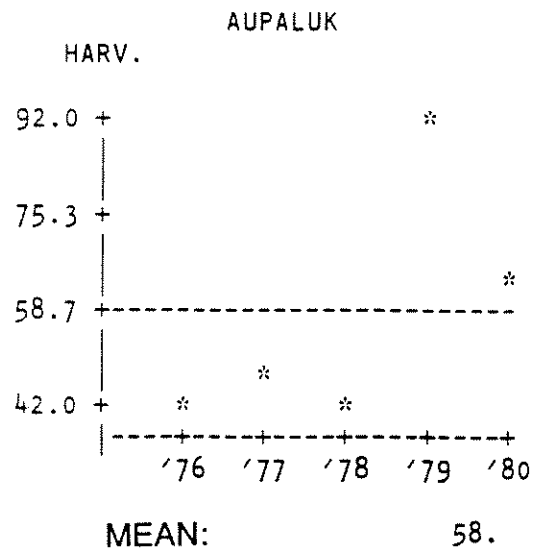
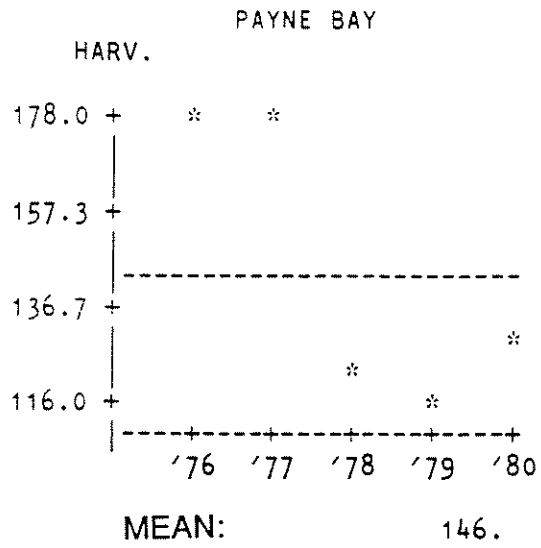
TOTAL FOOD WEIGHT (1000 lb.)



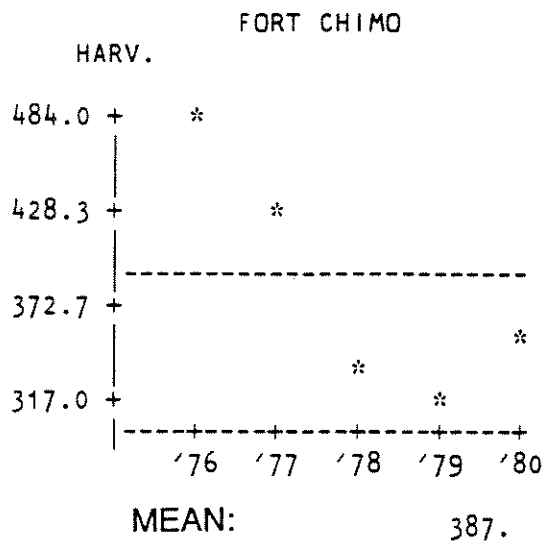
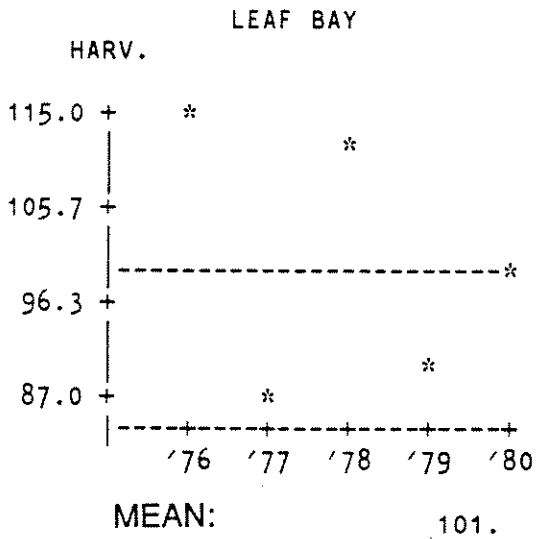
TOTAL FOOD WEIGHT (1000 lb.)



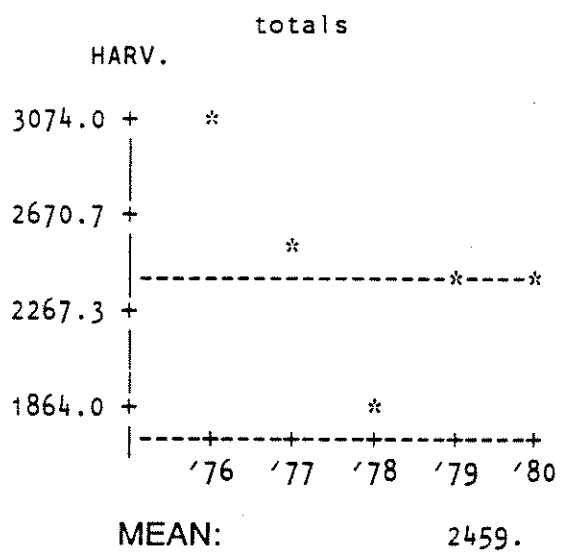
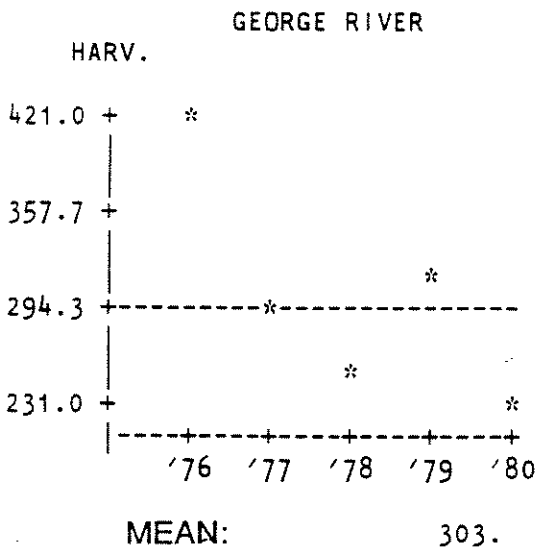
TOTAL FOOD WEIGHT (1000 lb.)



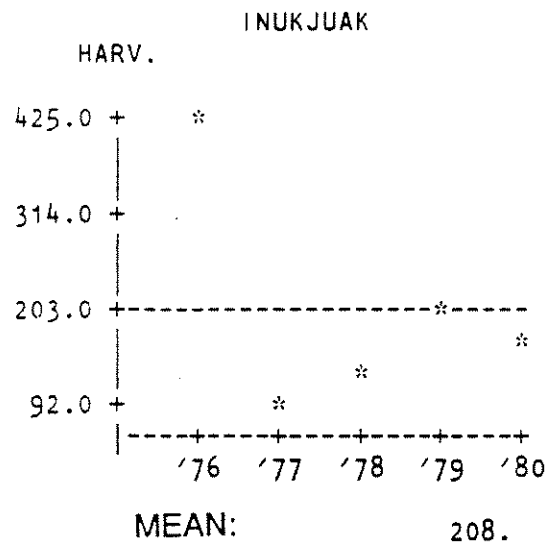
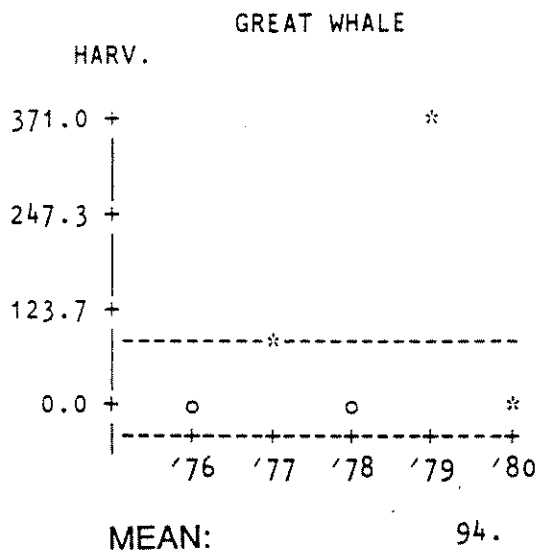
TOTAL FOOD WEIGHT (1000 lb.)



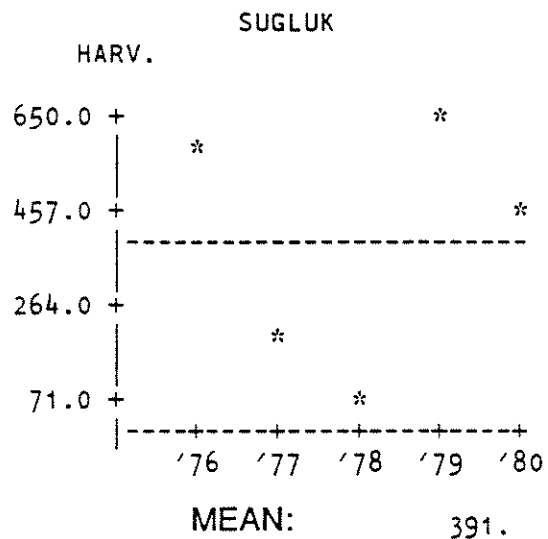
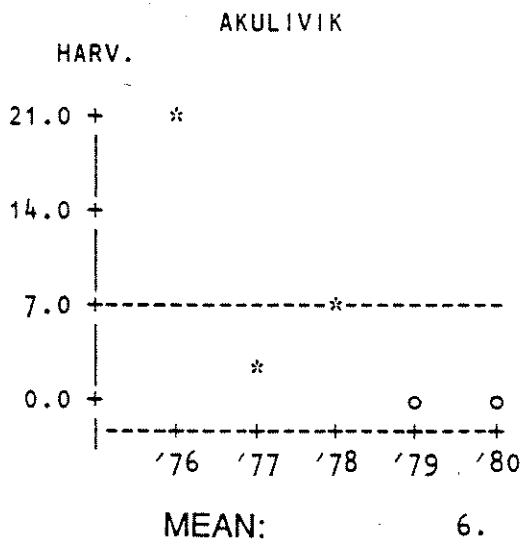
TOTAL FOOD WEIGHT (1000 lb.)



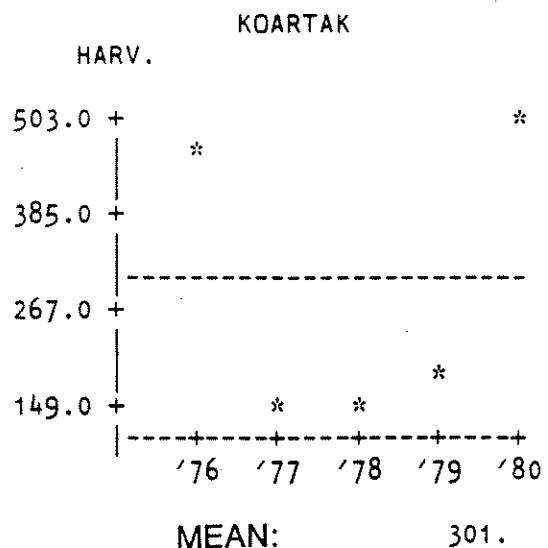
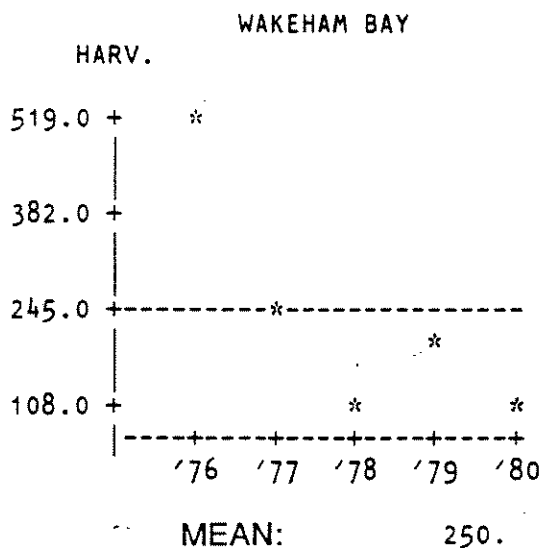
LANDLOCKED CHAR



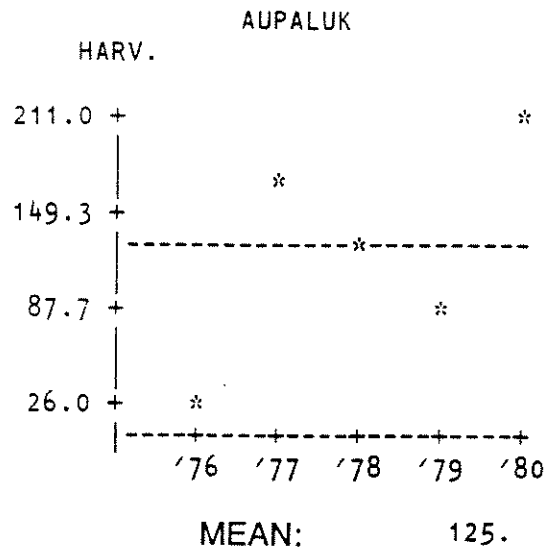
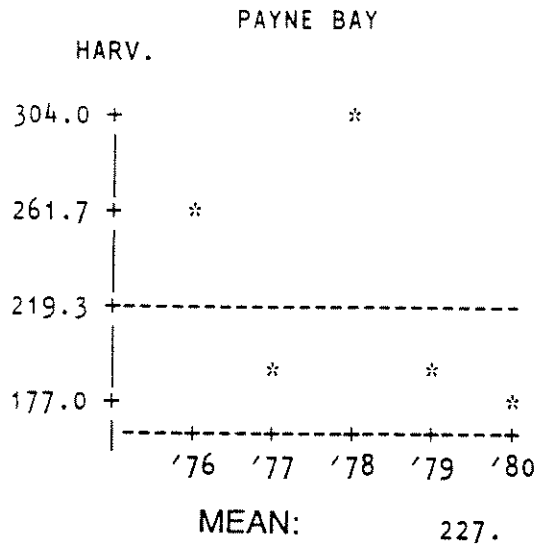
LANDLOCKED CHAR



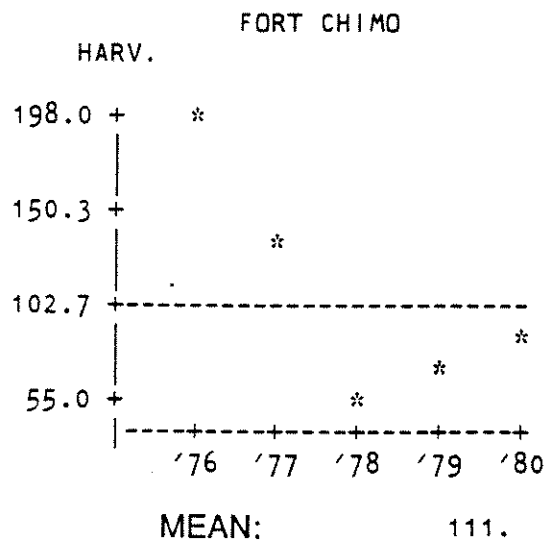
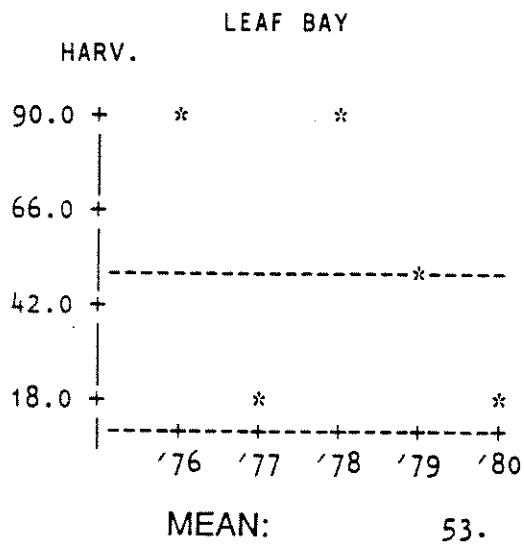
LANDLOCKED CHAR



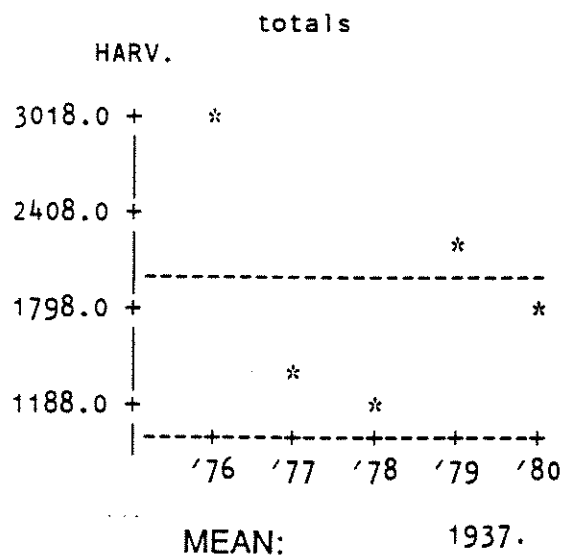
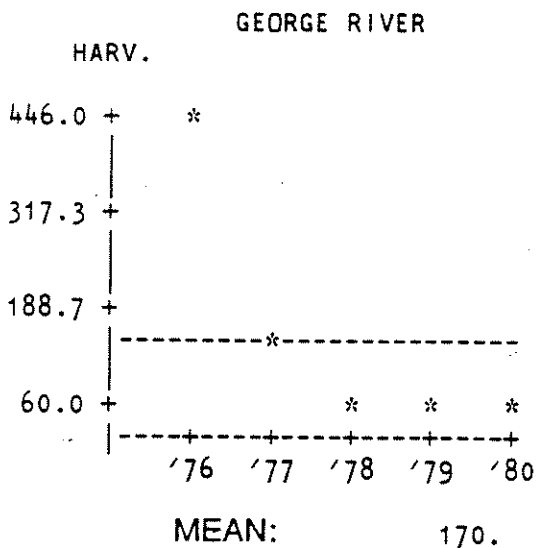
LANDLOCKED CHAR



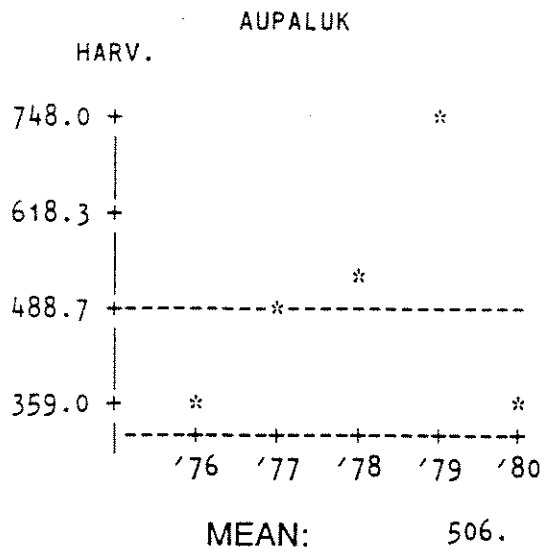
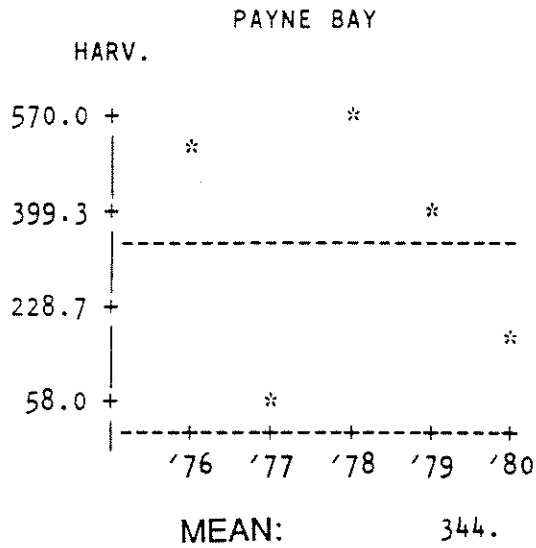
LANDLOCKED CHAR



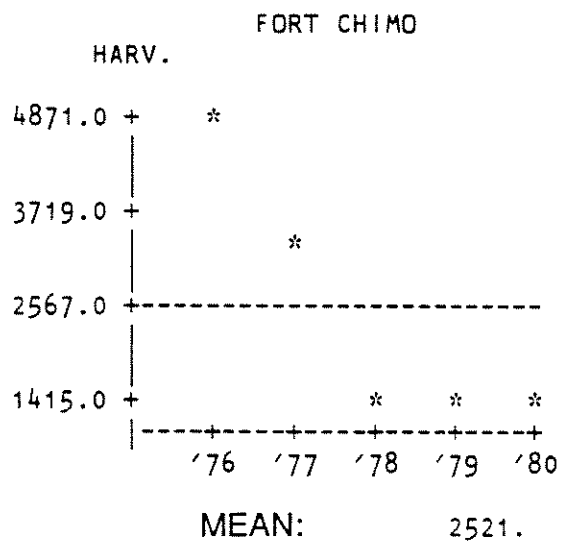
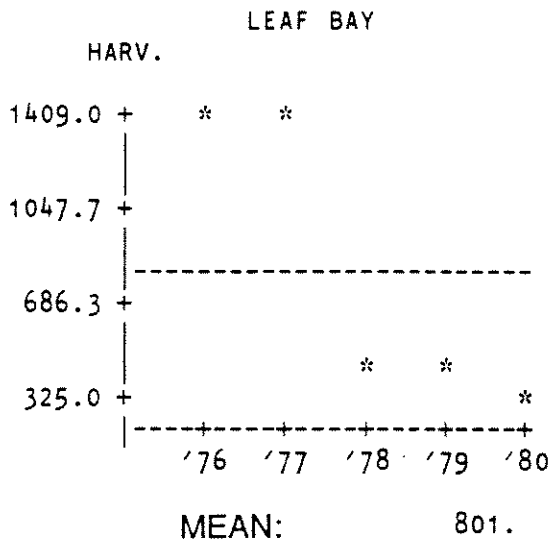
LANDLOCKED CHAR



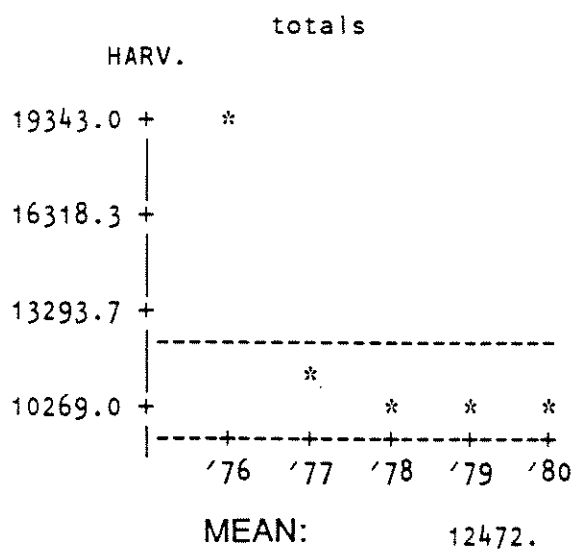
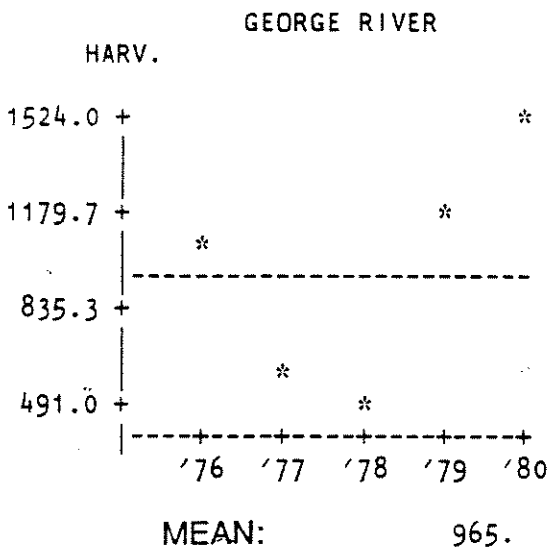
SCULPIN



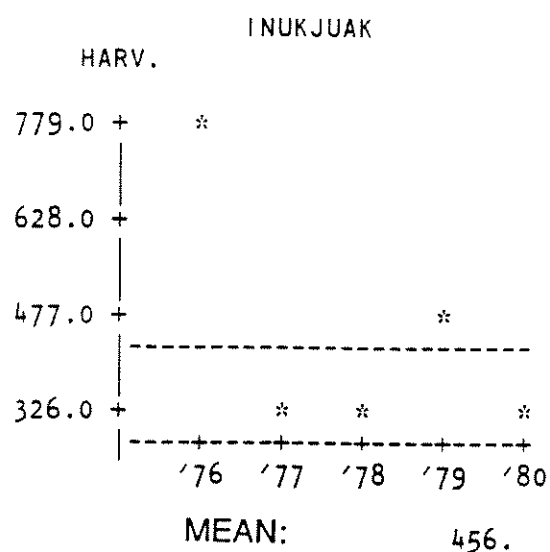
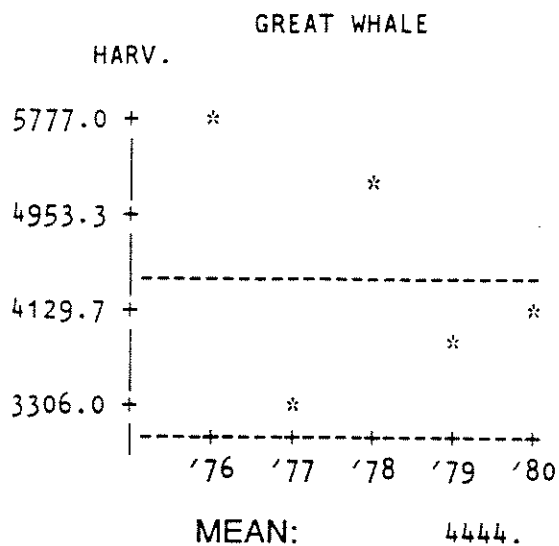
SCULPIN



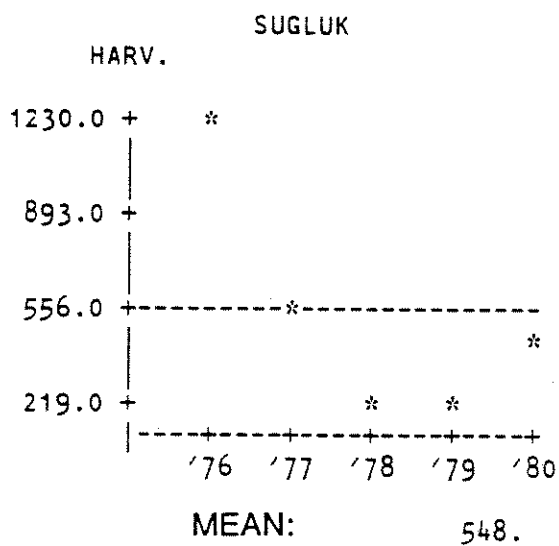
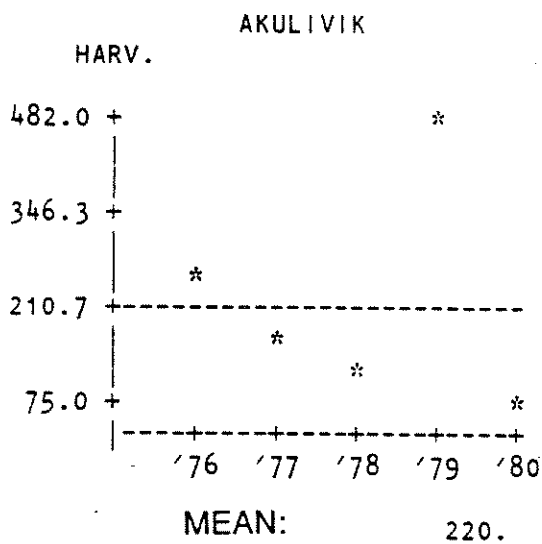
SCULPIN



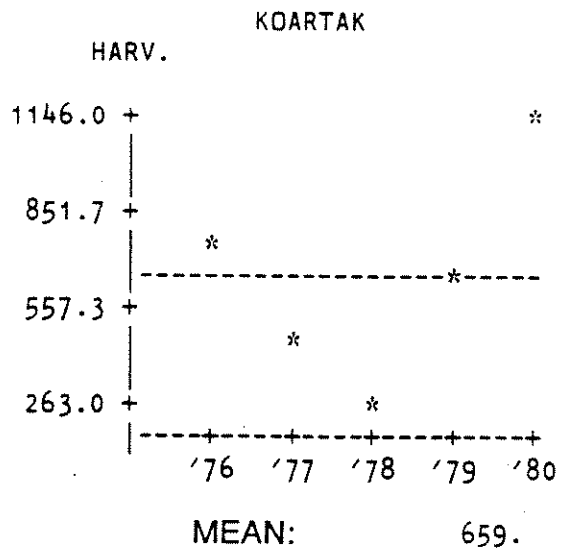
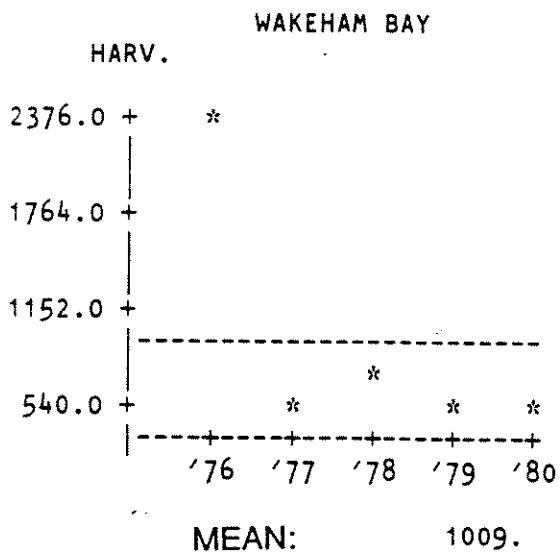
SCULPIN



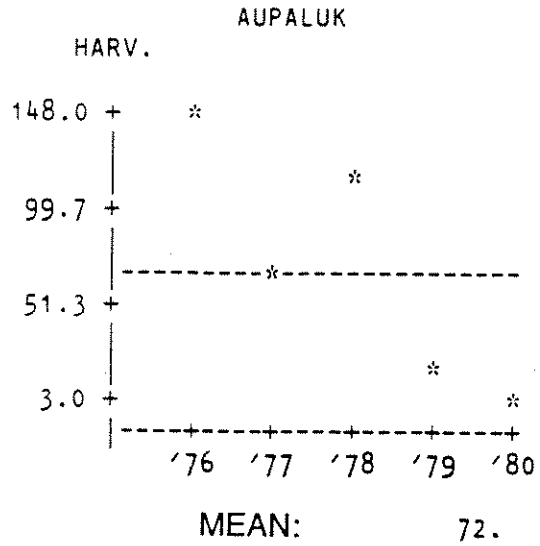
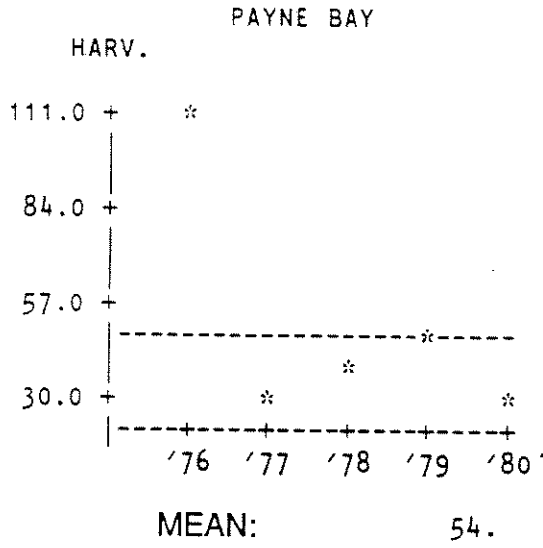
SCULPIN



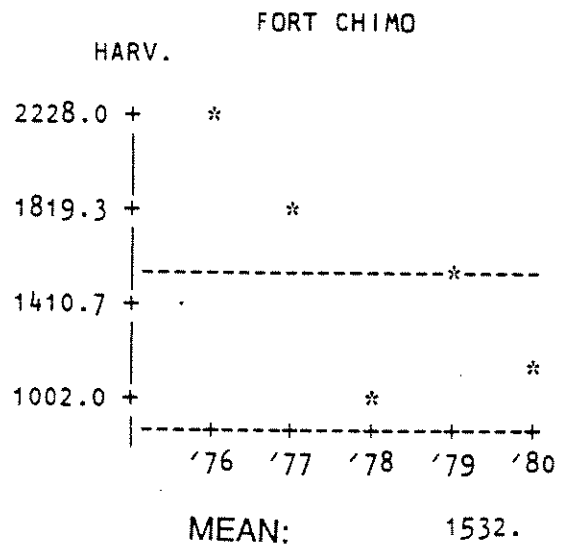
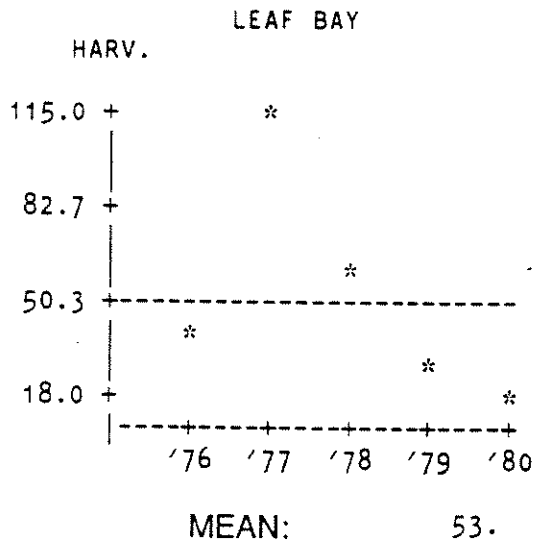
SCULPIN



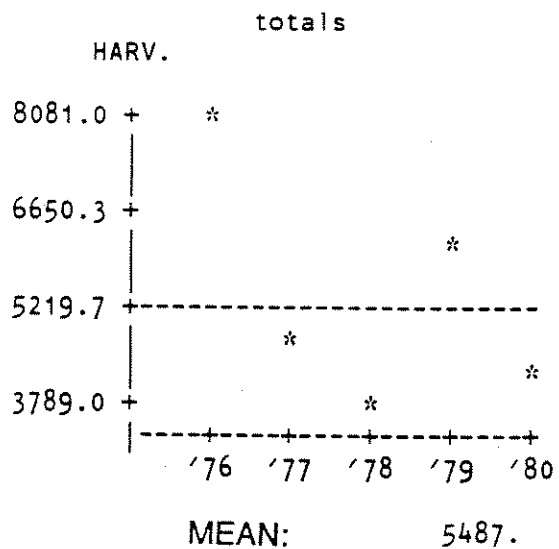
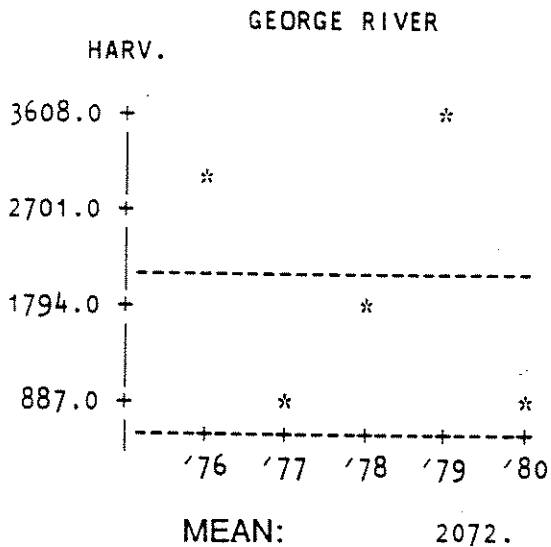
BROOK TROUT, FALL



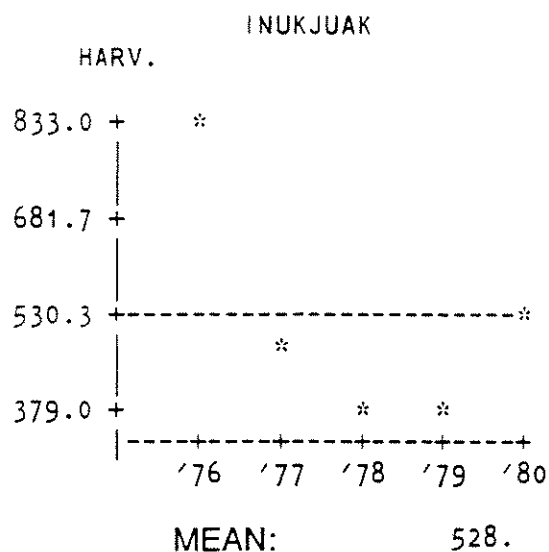
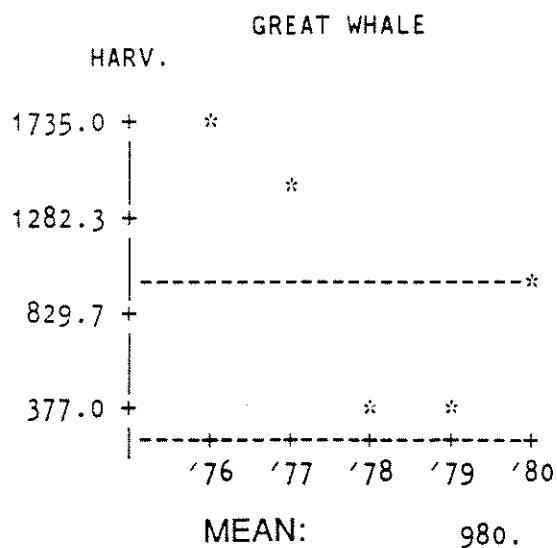
BROOK TROUT, FALL



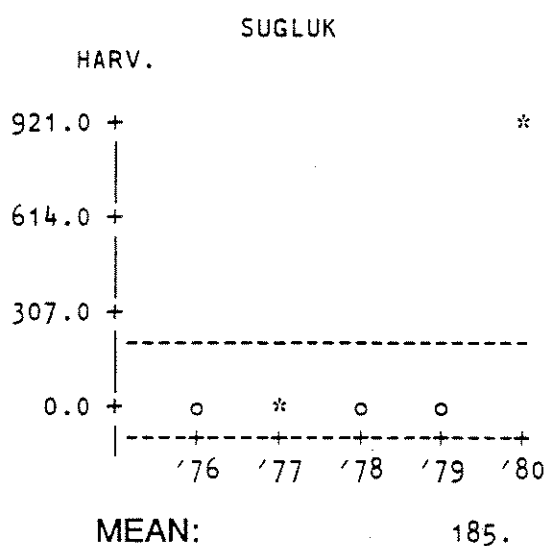
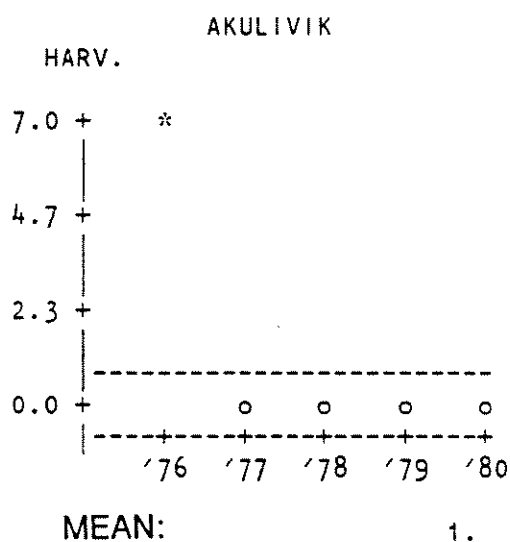
BROOK TROUT, FALL



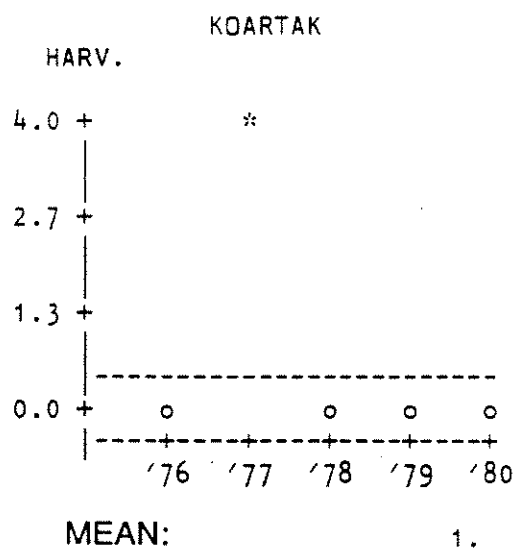
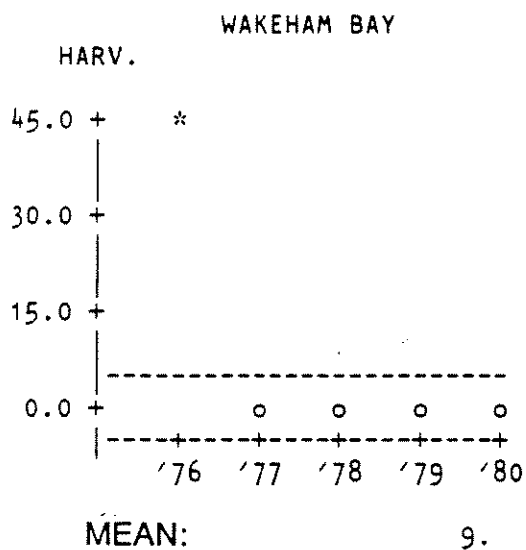
BROOK TROUT, FALL



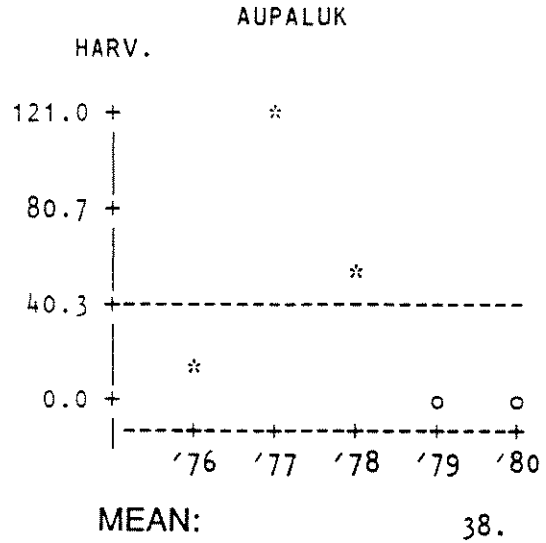
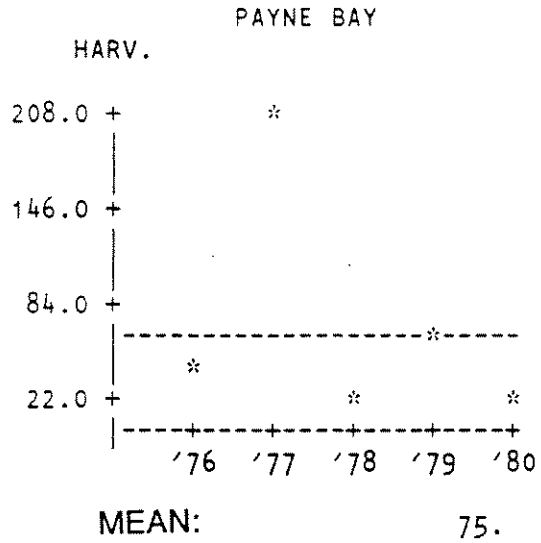
BROOK TROUT, FALL



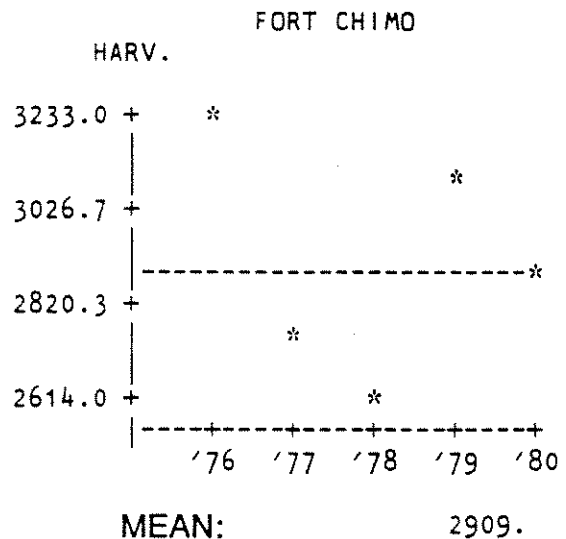
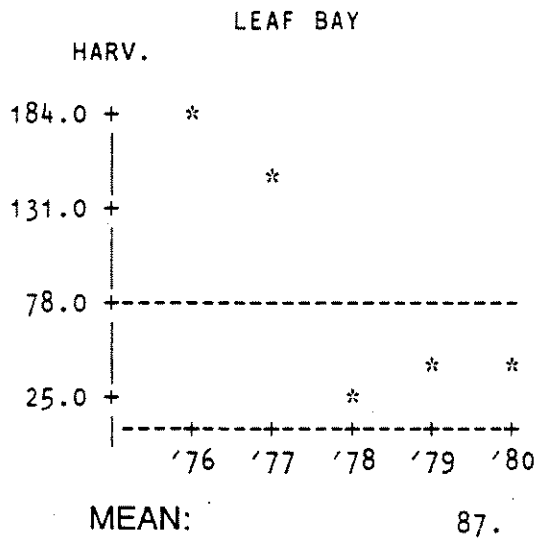
BROOK TROUT, FALL



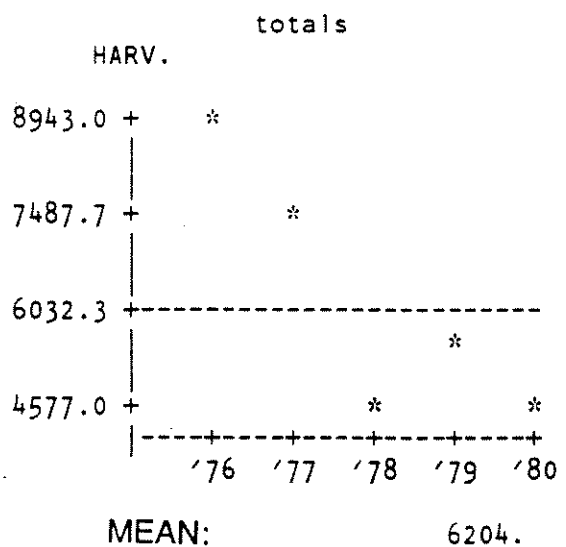
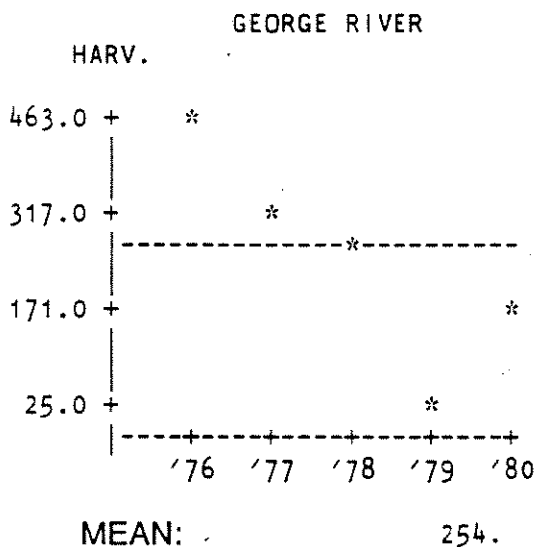
BROOK TROUT, SUMMER



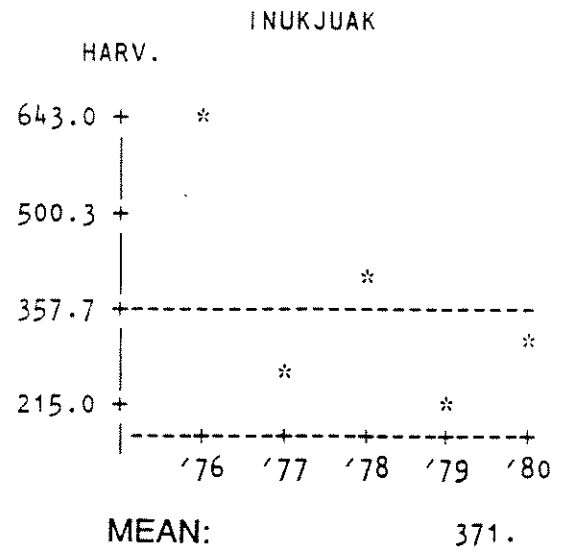
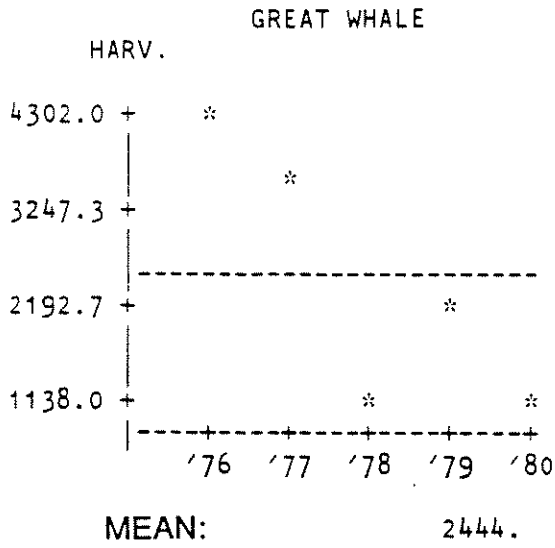
BROOK TROUT, SUMMER



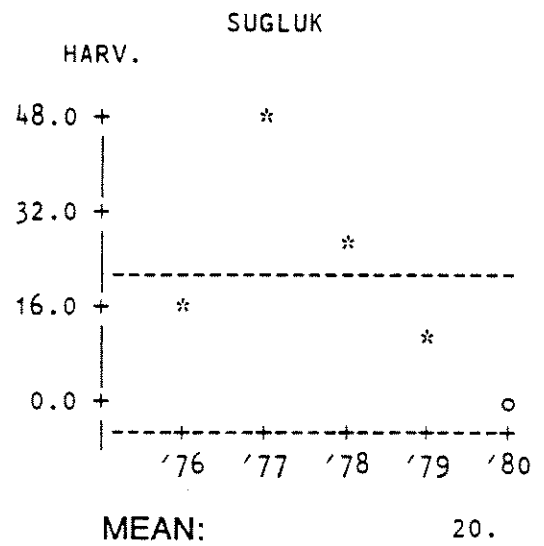
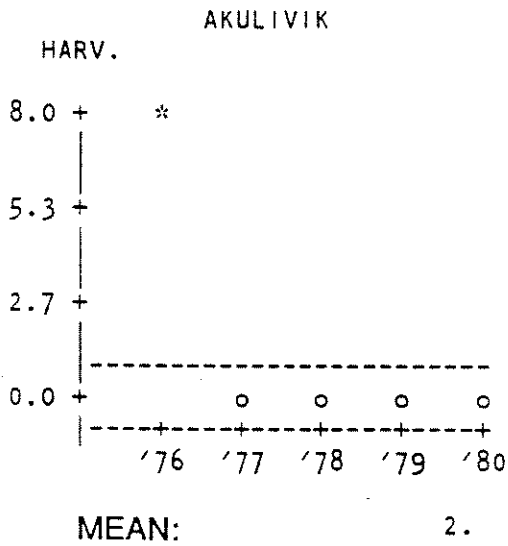
BROOK TROUT, SUMMER



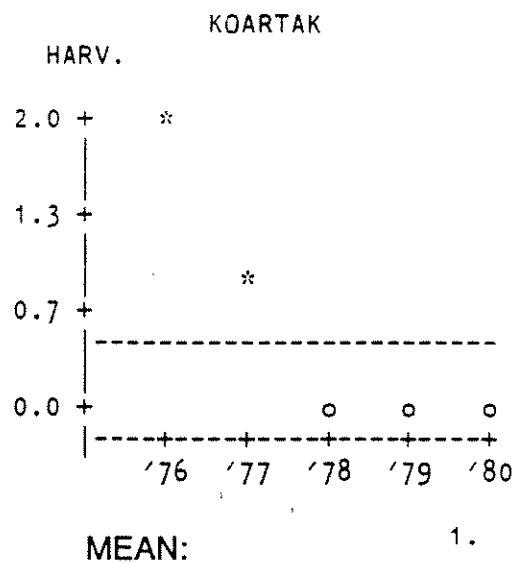
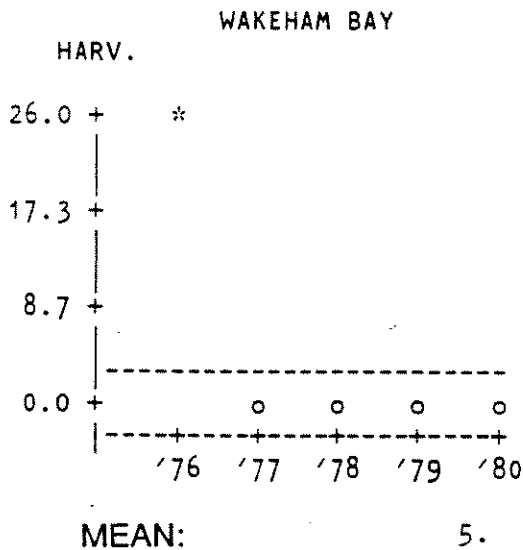
BROOK TROUT, SUMMER



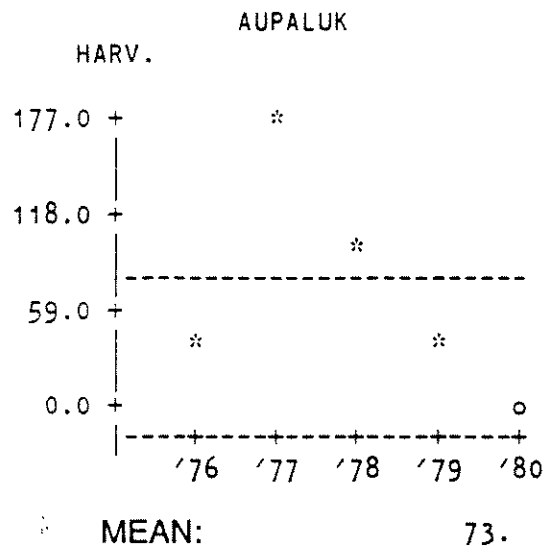
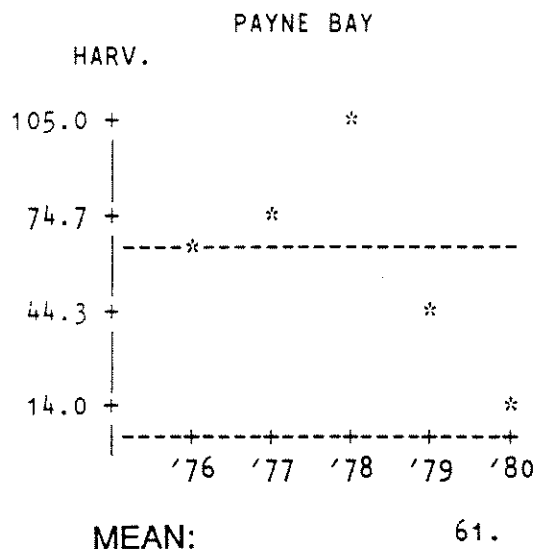
BROOK TROUT, SUMMER



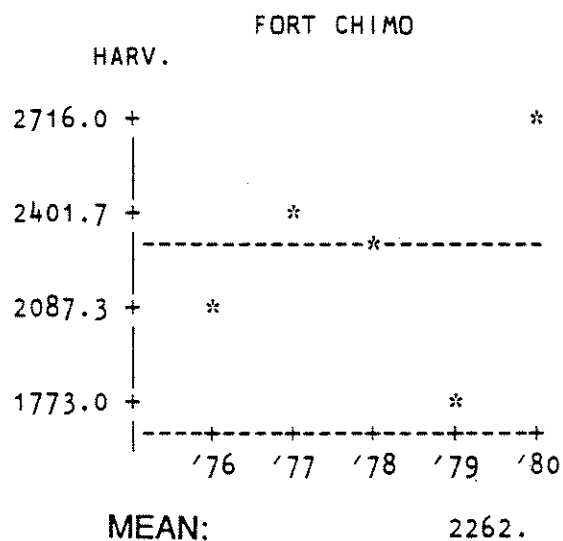
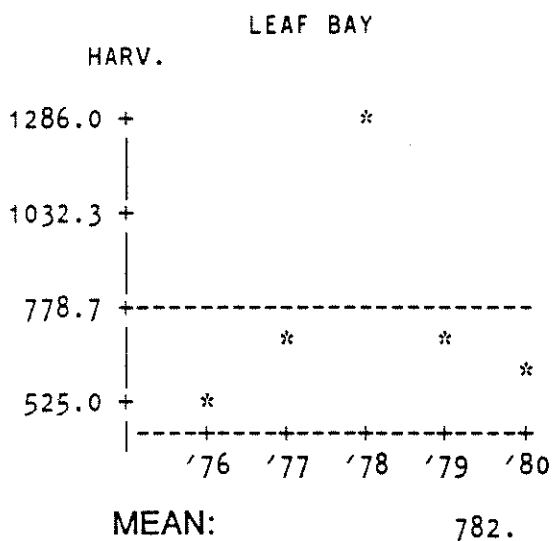
BROOK TROUT, SUMMER



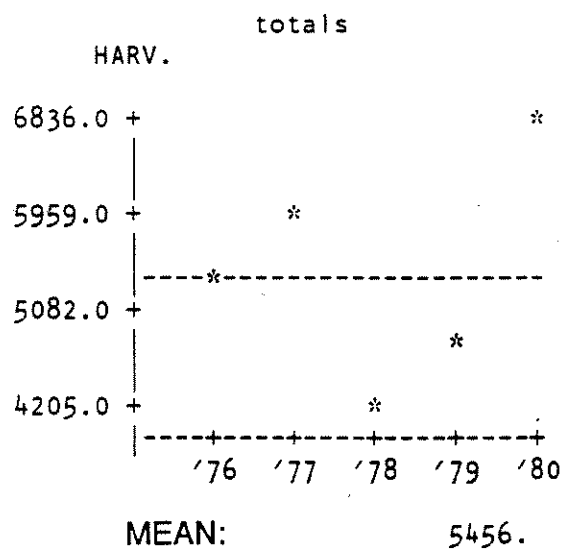
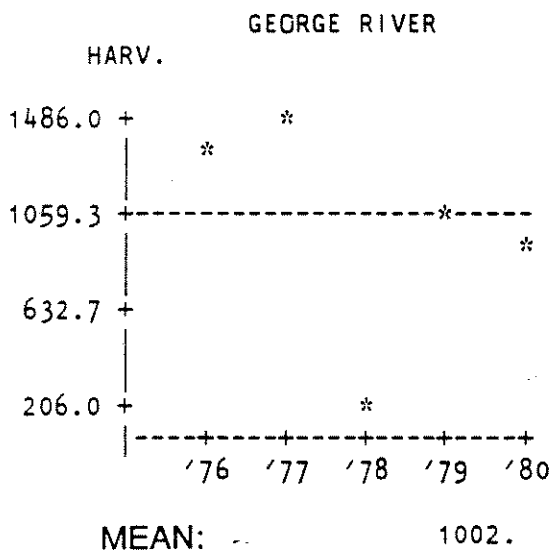
BROOK TROUT, WINTER



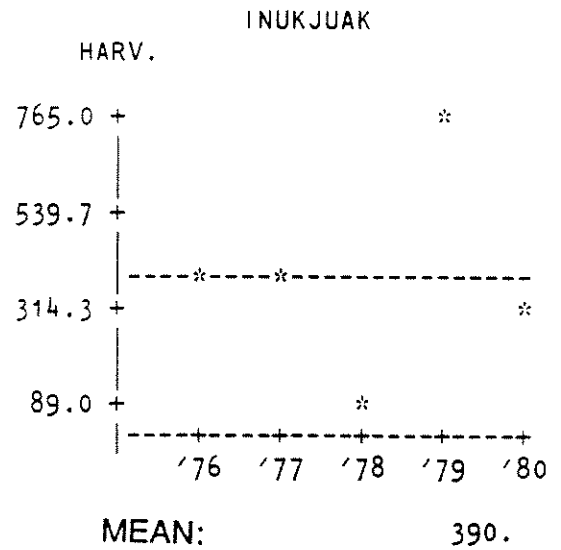
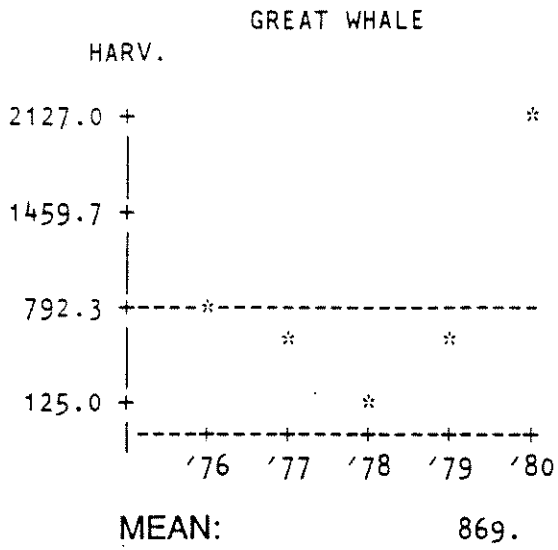
BROOK TROUT, WINTER



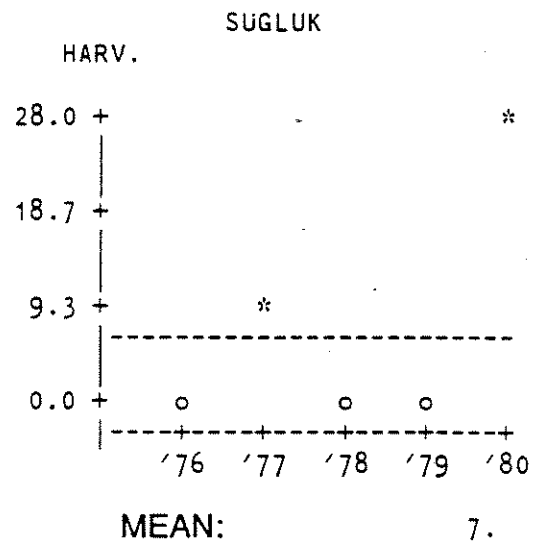
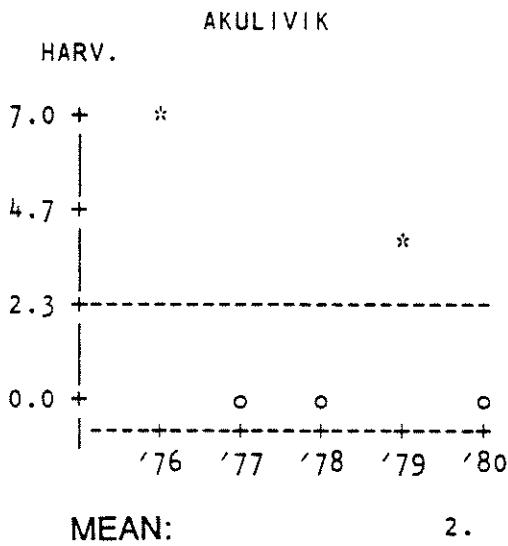
BROOK TROUT, WINTER



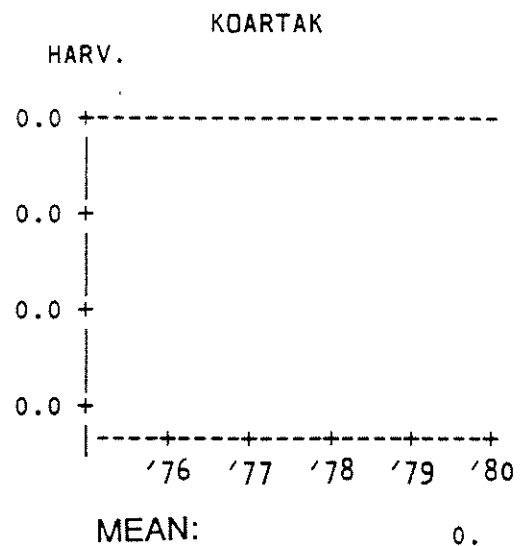
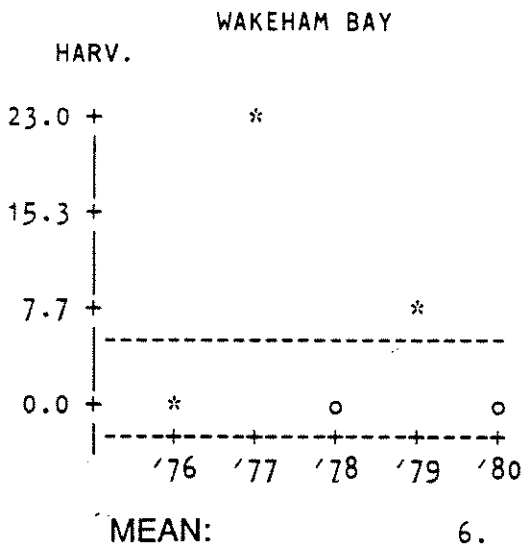
BROOK TROUT, WINTER



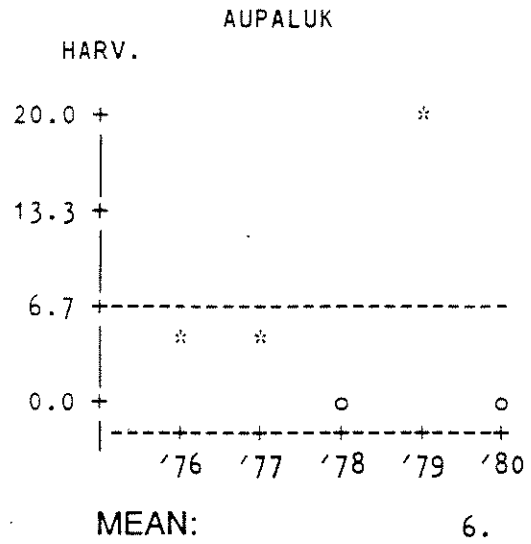
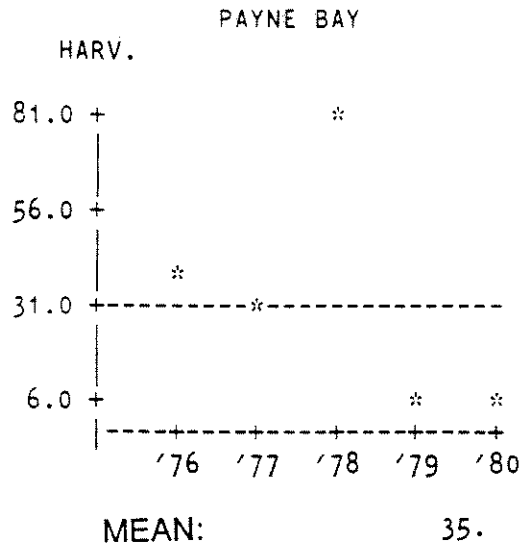
BROOK TROUT, WINTER



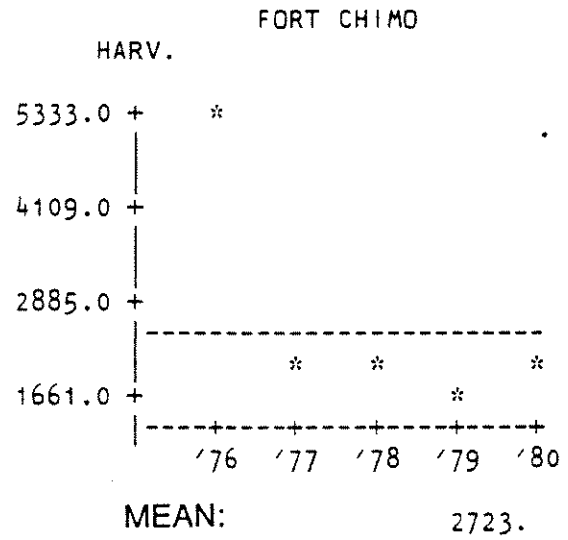
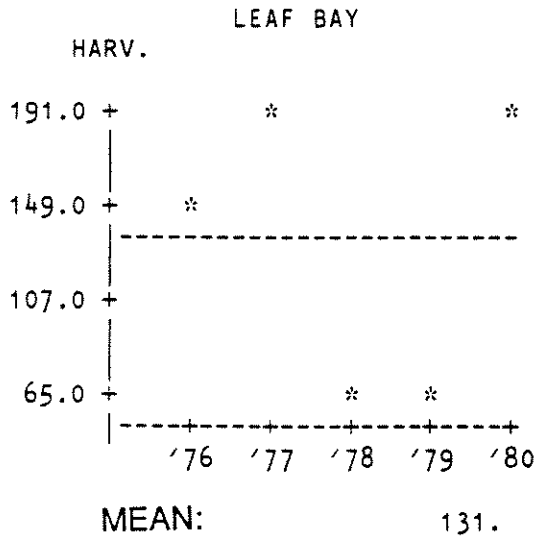
BROOK TROUT, WINTER



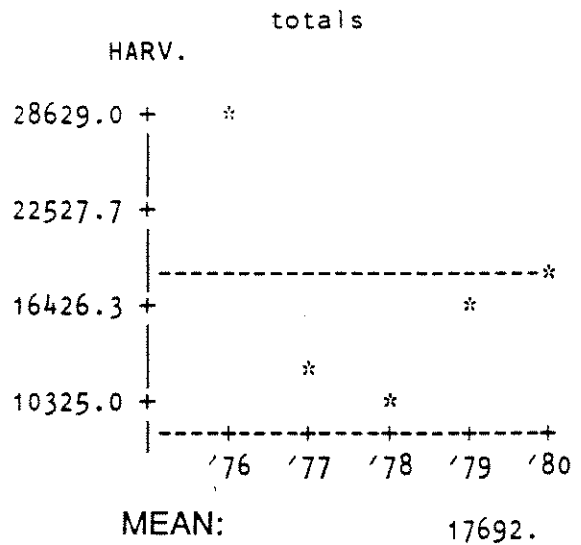
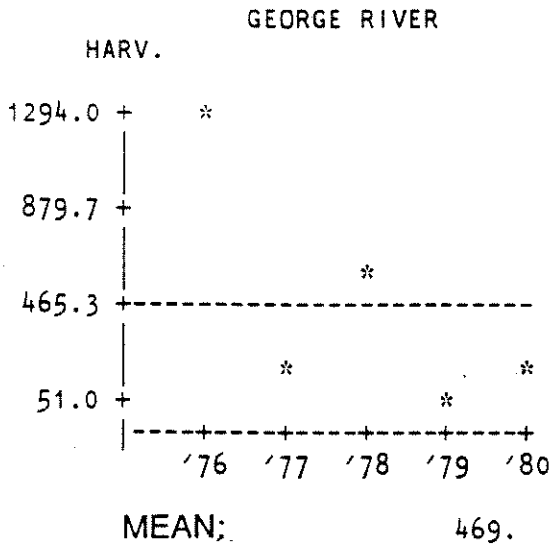
WHITEFISH



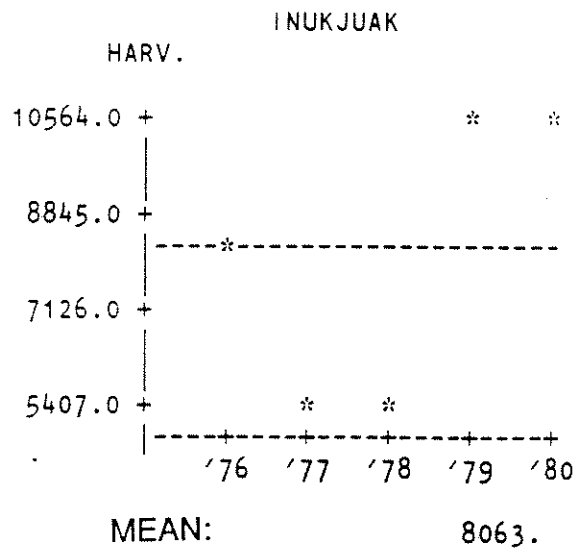
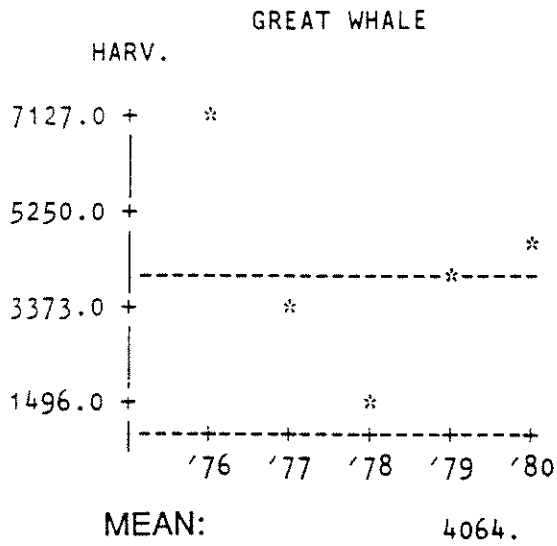
WHITEFISH



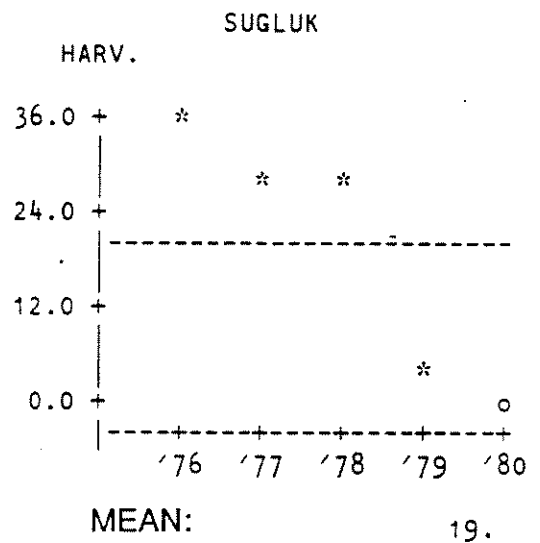
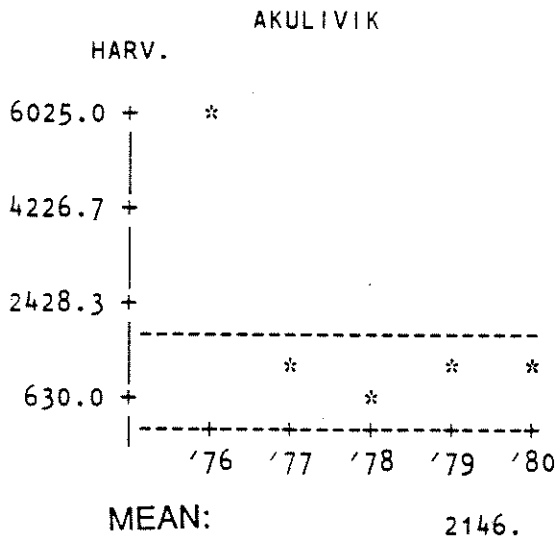
WHITEFISH



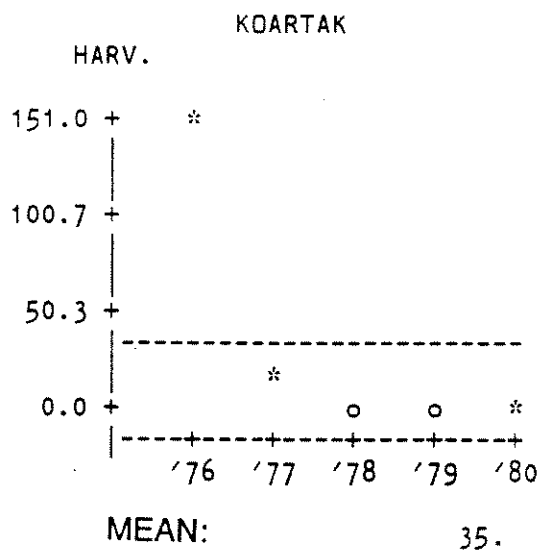
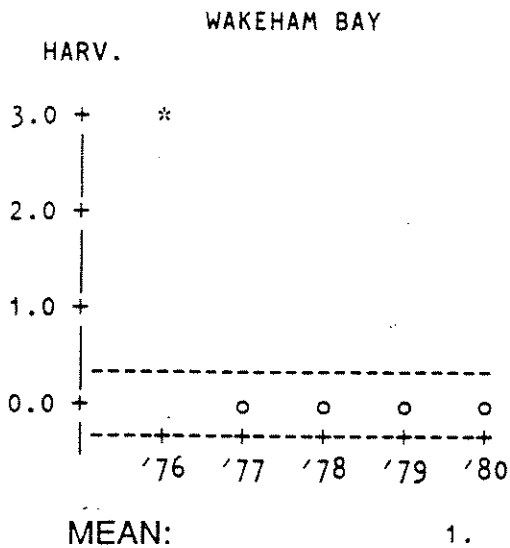
WHITEFISH



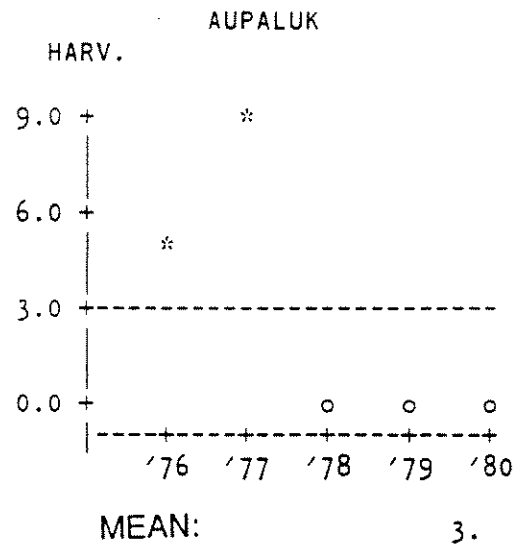
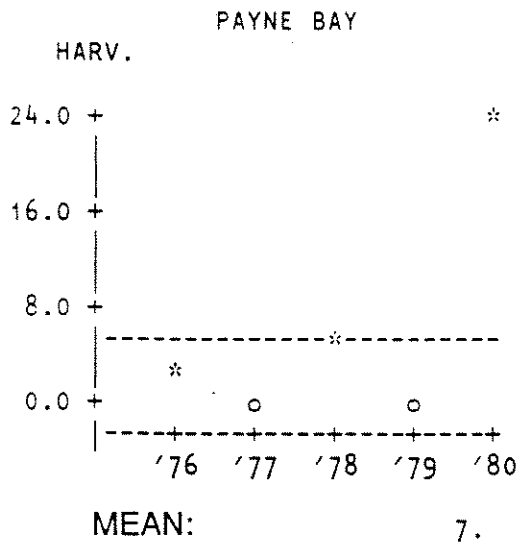
WHITEFISH



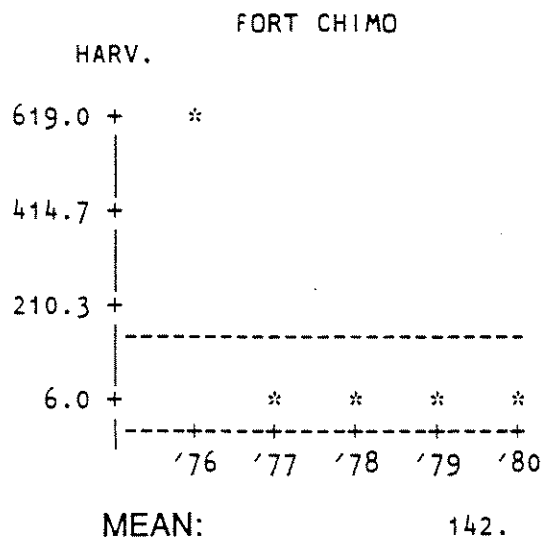
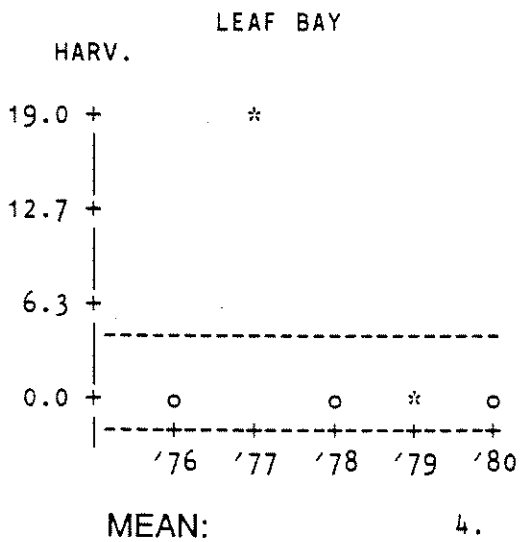
WHITEFISH



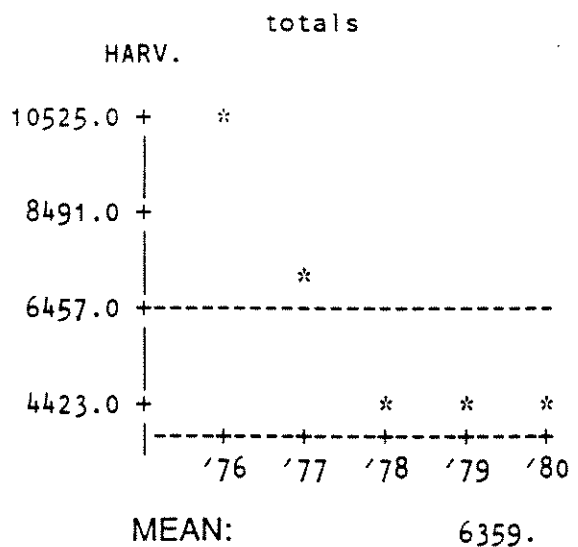
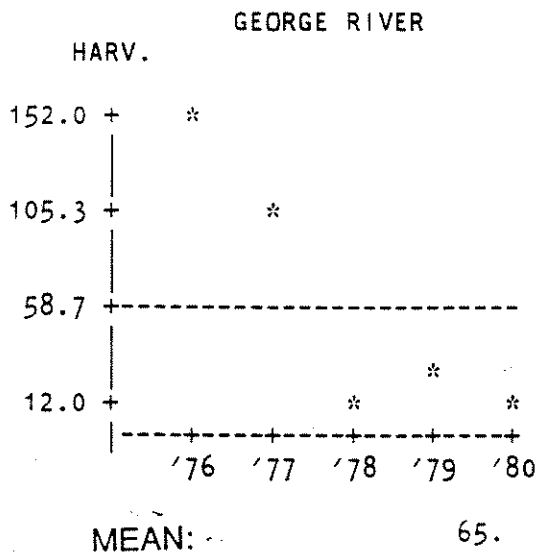
COD FISH



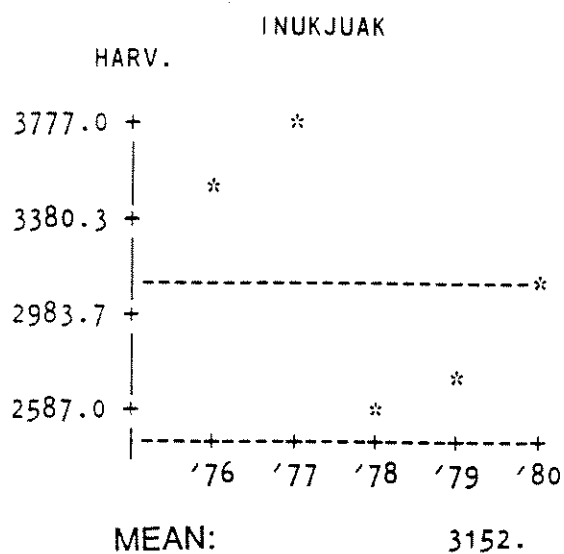
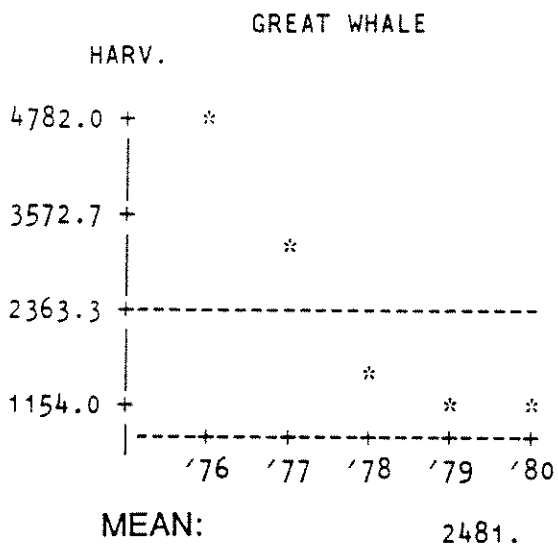
COD FISH



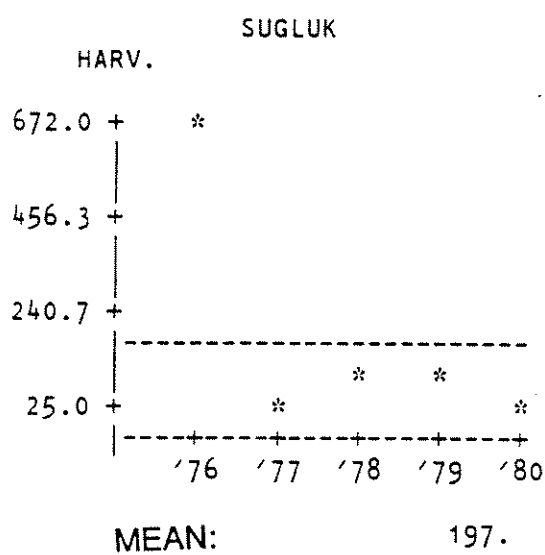
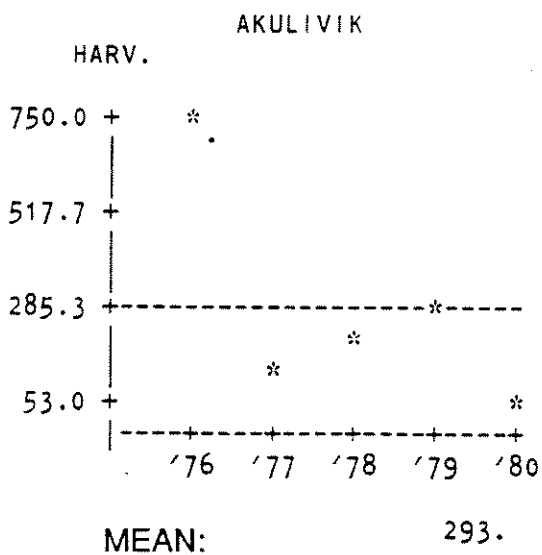
COD FISH



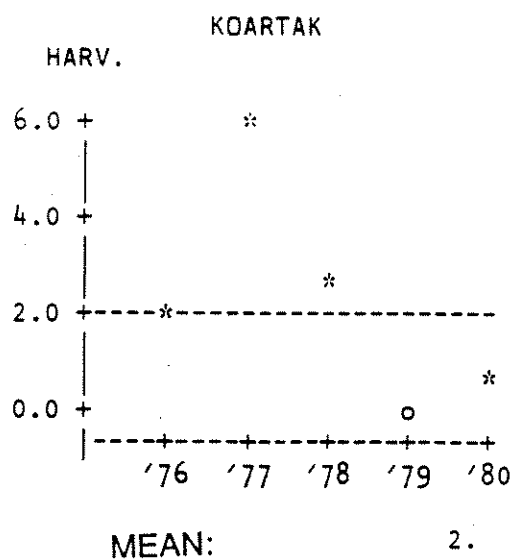
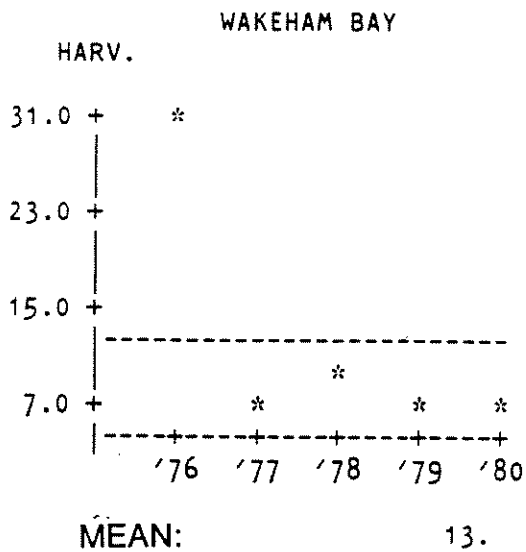
COD FISH



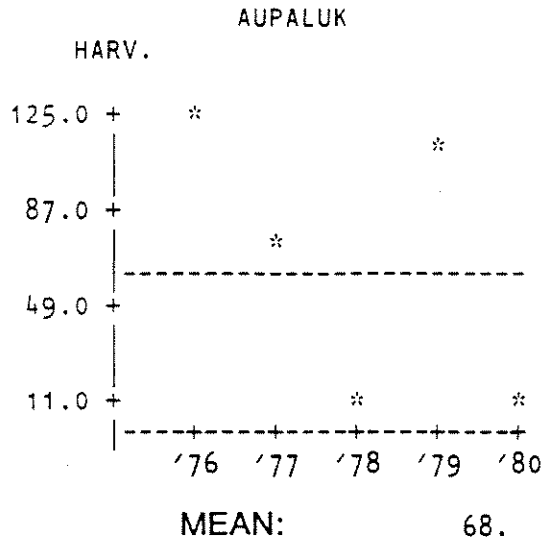
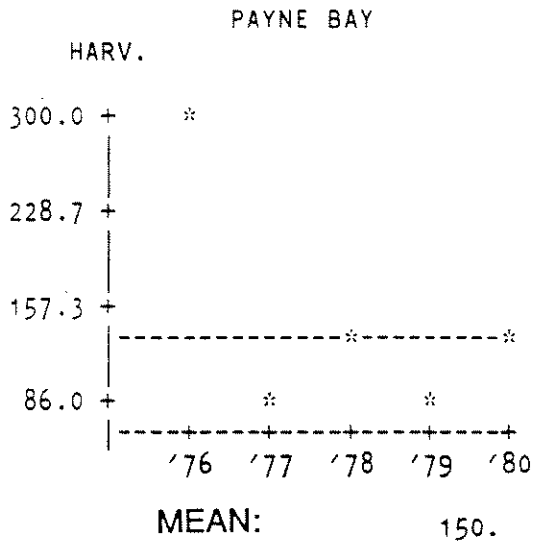
COD FISH



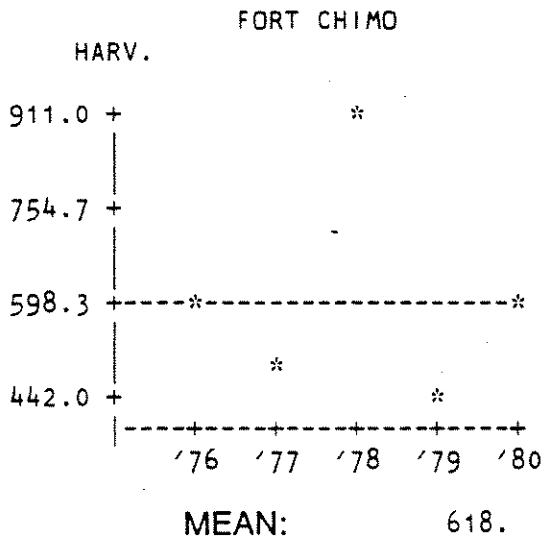
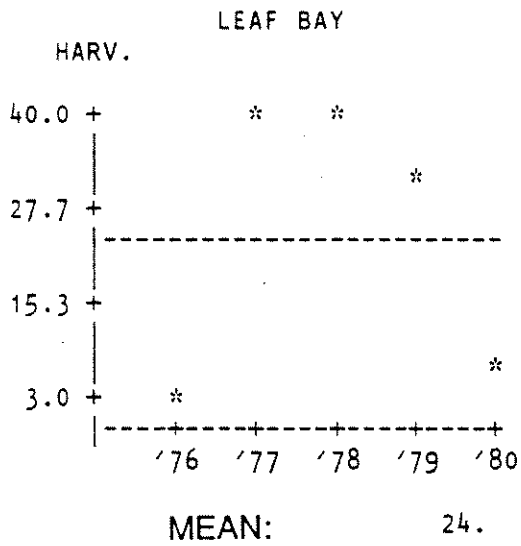
COD FISH



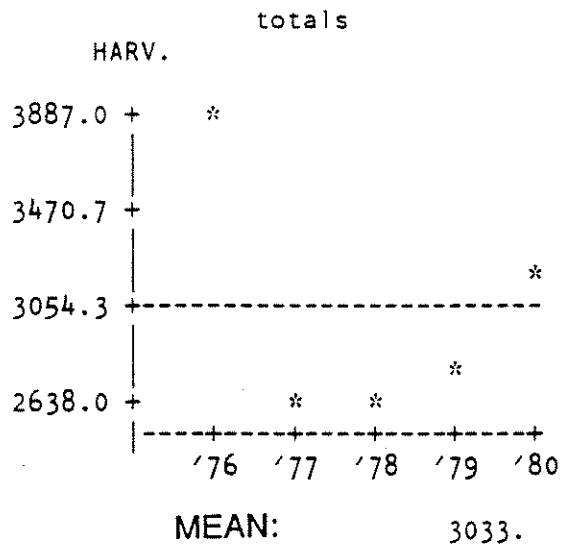
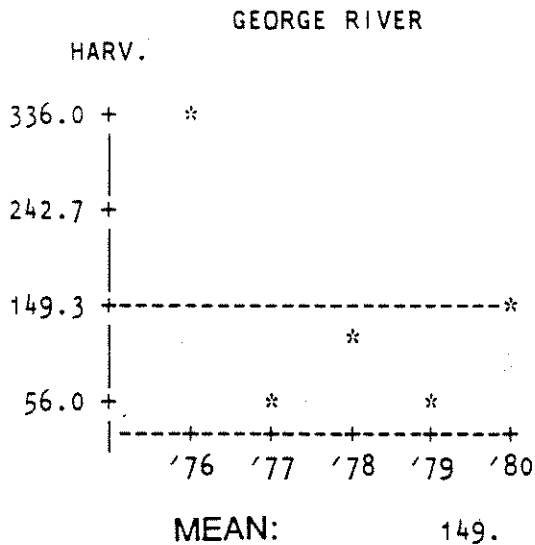
LAKE TROUT, FALL



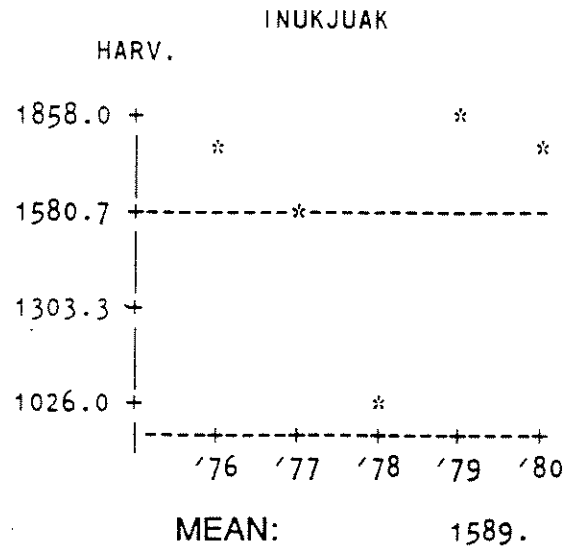
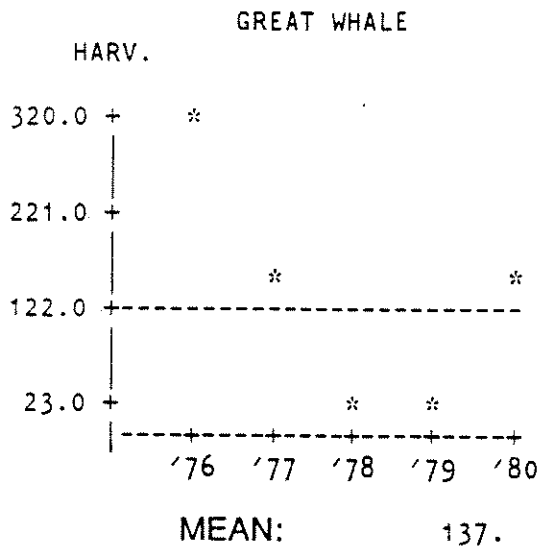
LAKE TROUT, FALL



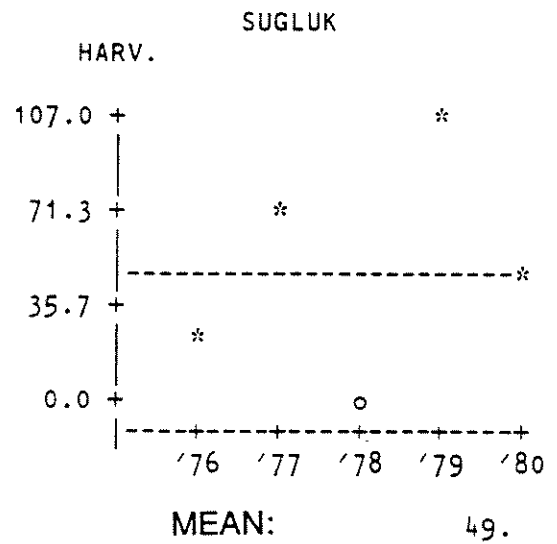
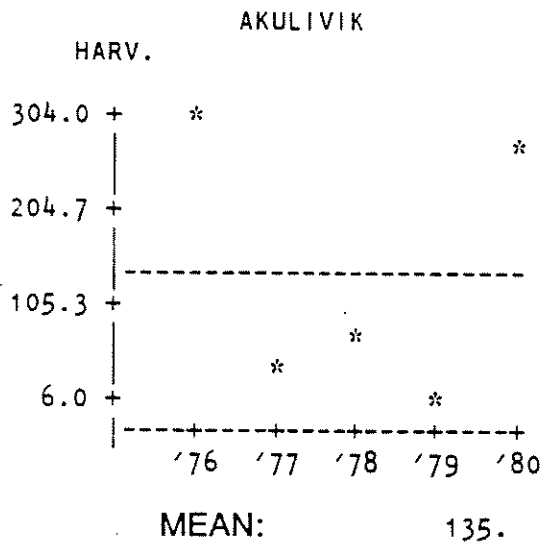
LAKE TROUT, FALL



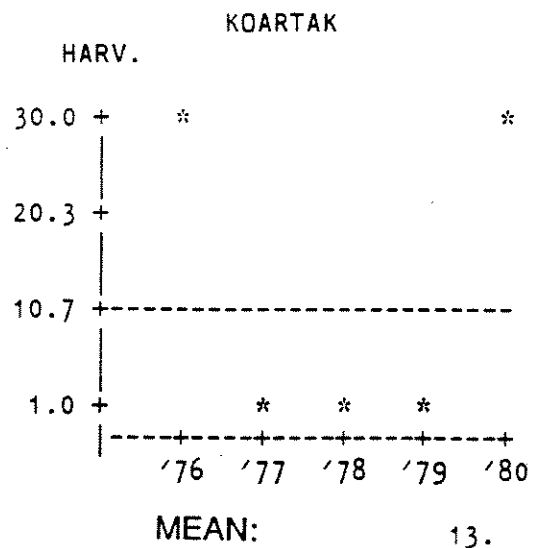
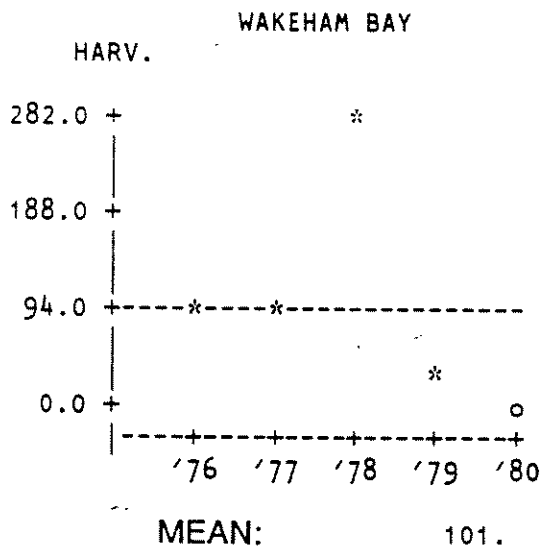
LAKE TROUT, FALL



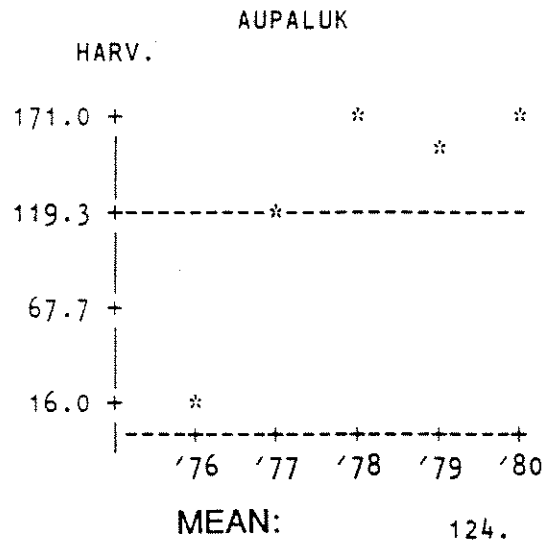
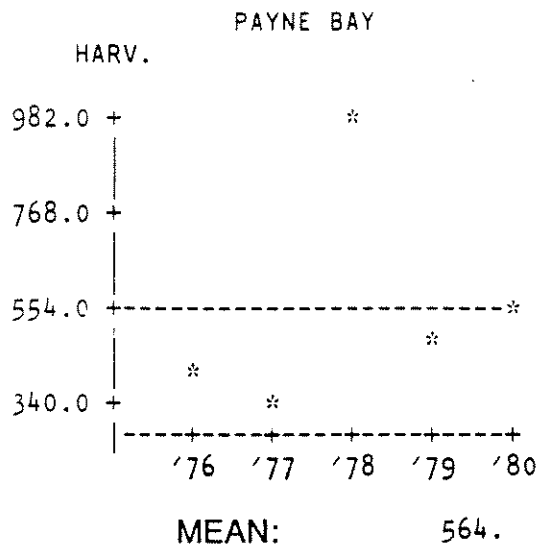
LAKE TROUT, FALL



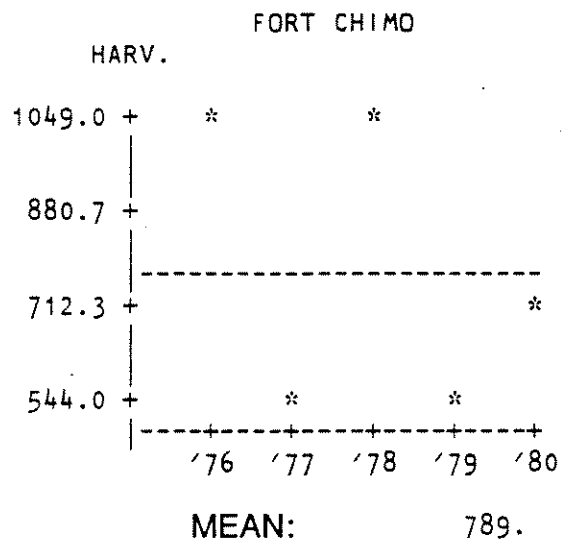
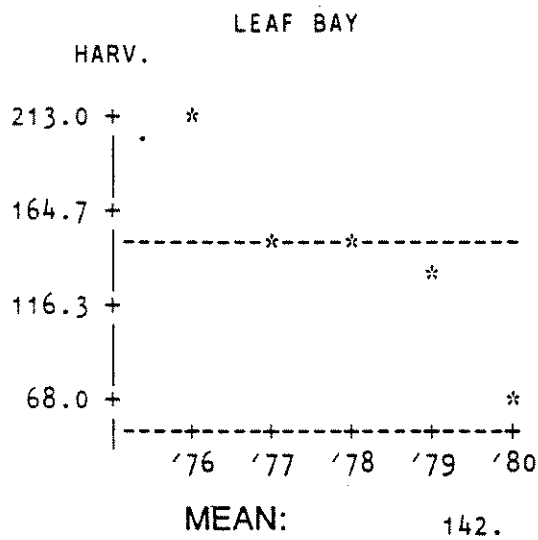
LAKE TROUT, FALL



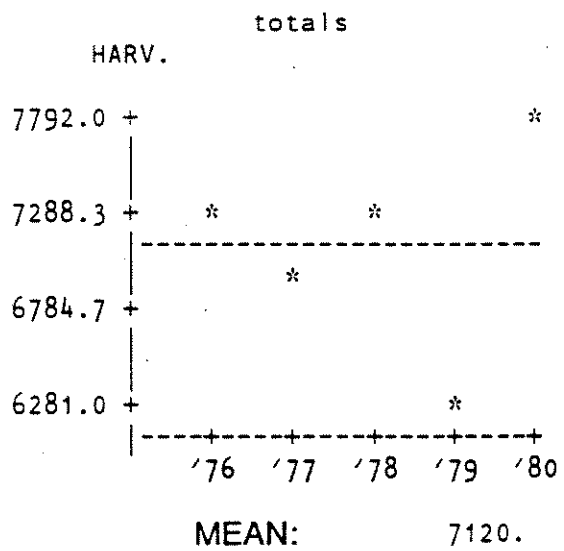
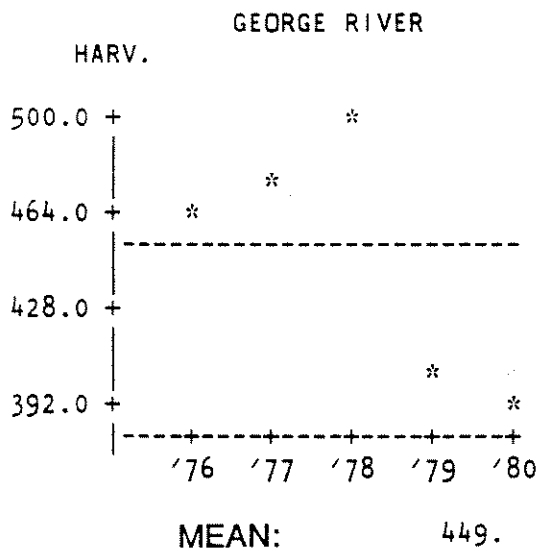
LAKE TROUT, SUMMER



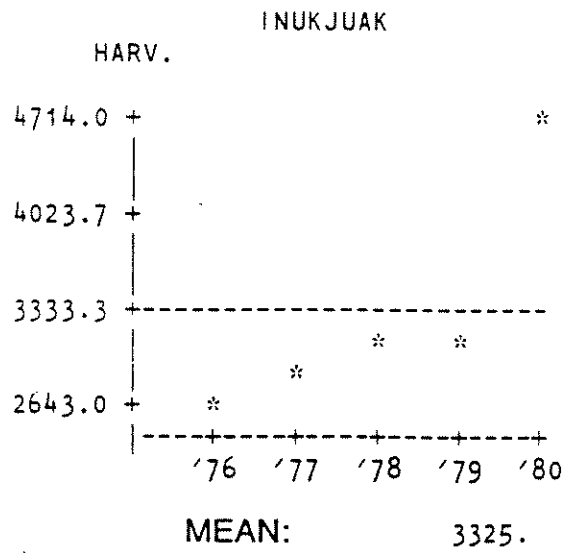
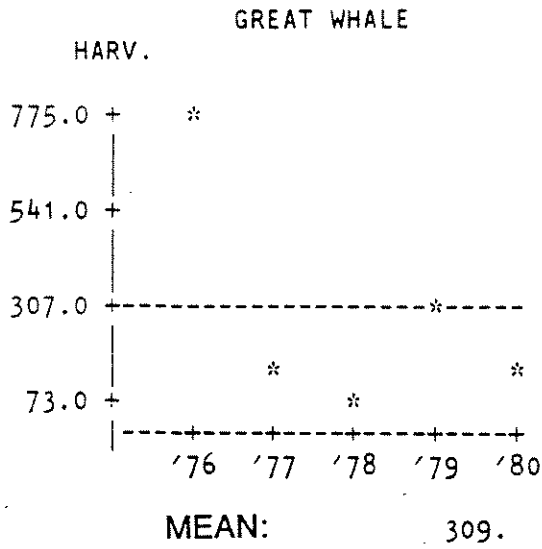
LAKE TROUT, SUMMER



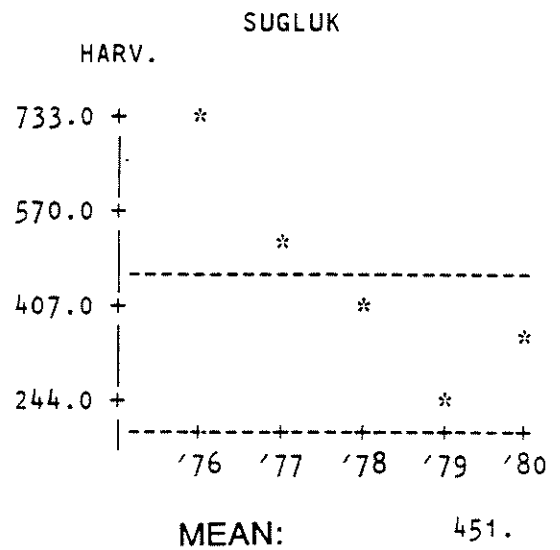
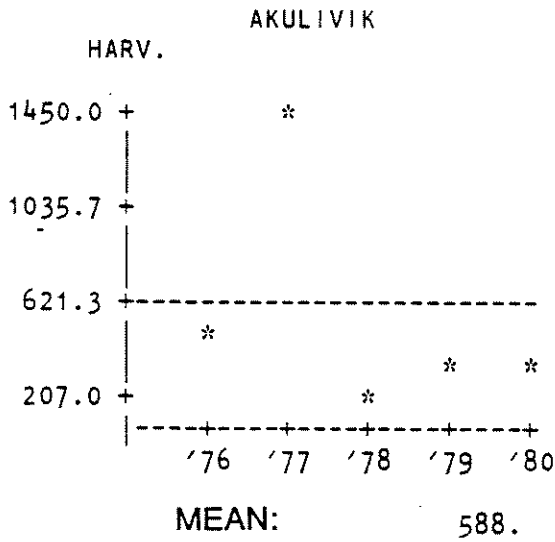
LAKE TROUT, SUMMER



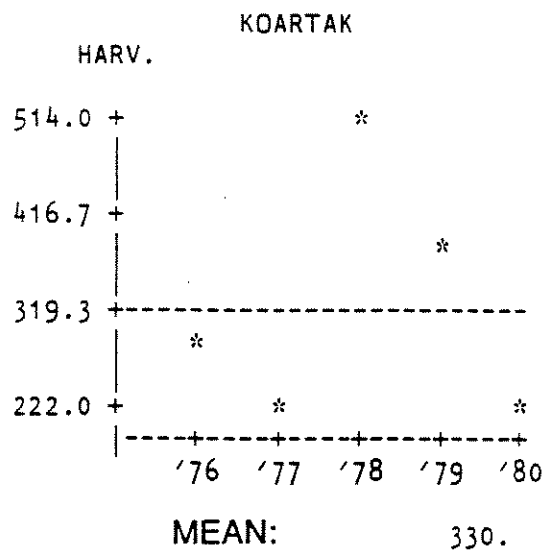
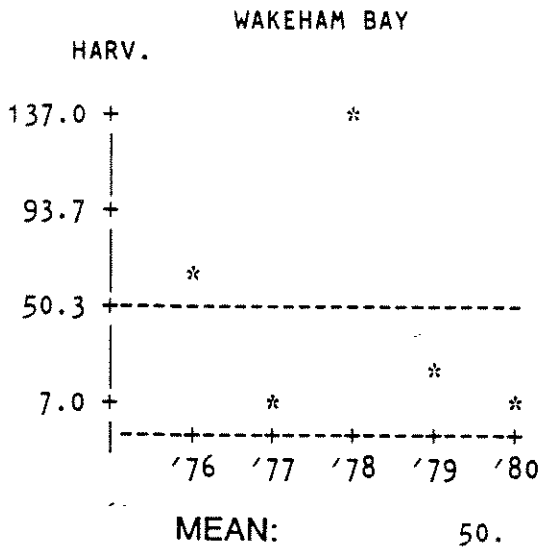
LAKE TROUT, SUMMER



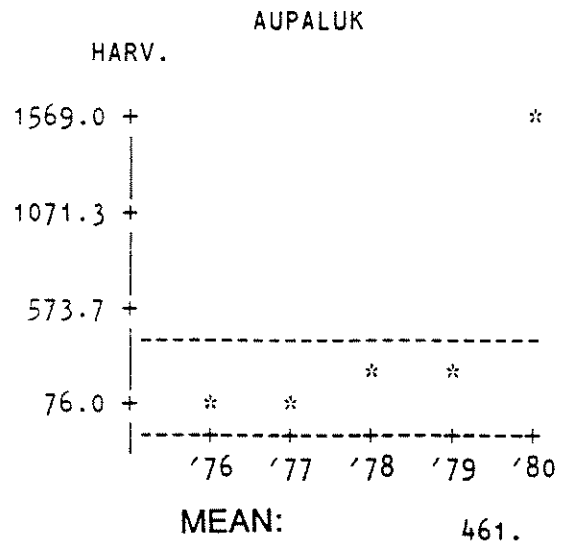
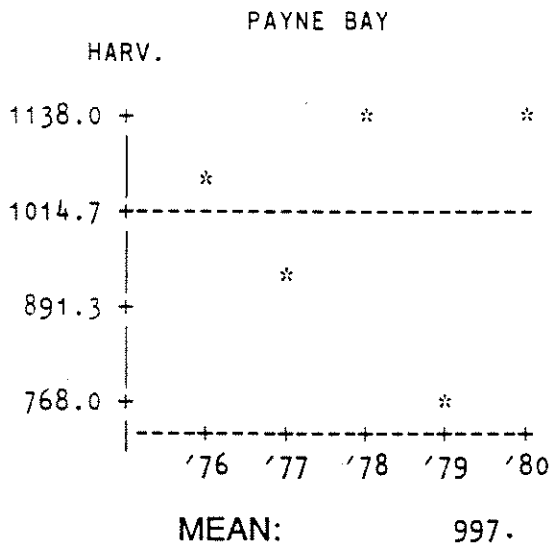
LAKE TROUT, SUMMER



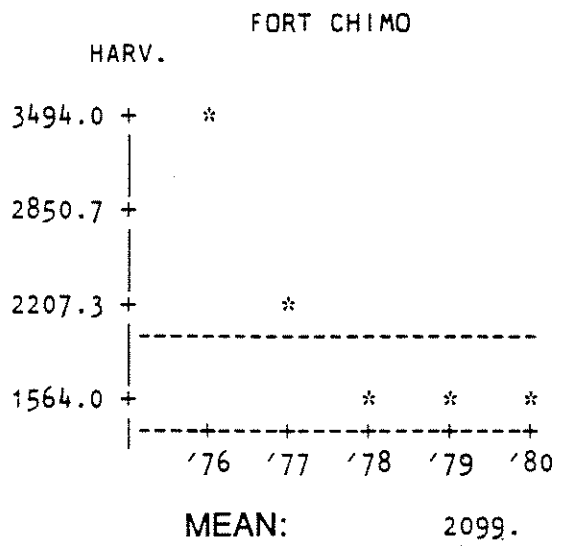
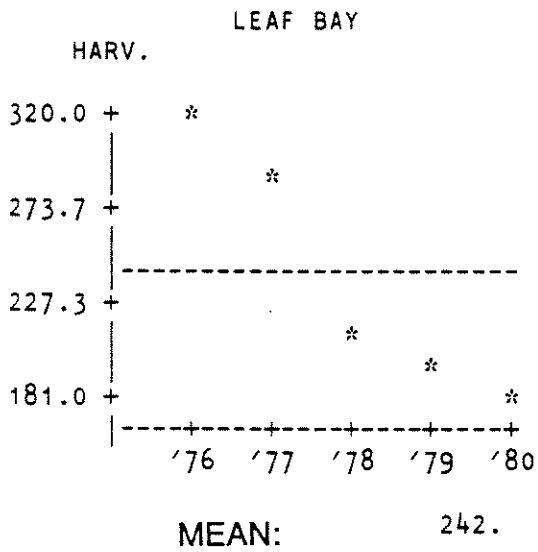
LAKE TROUT, SUMMER



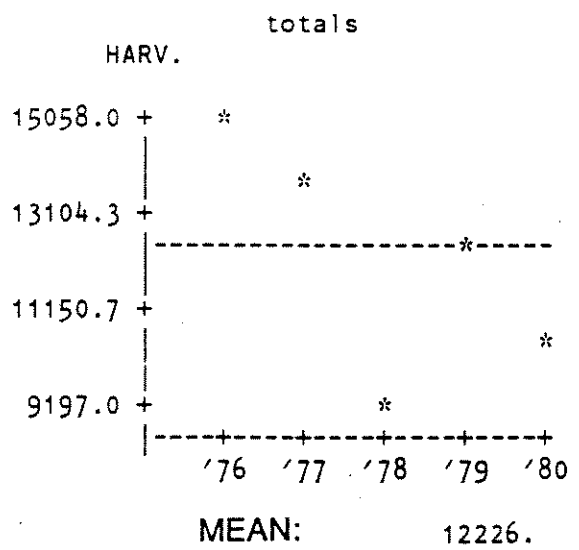
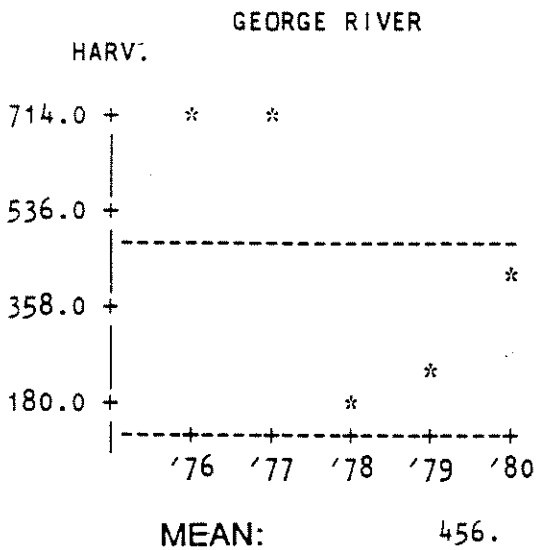
LAKE TROUT, WINTER



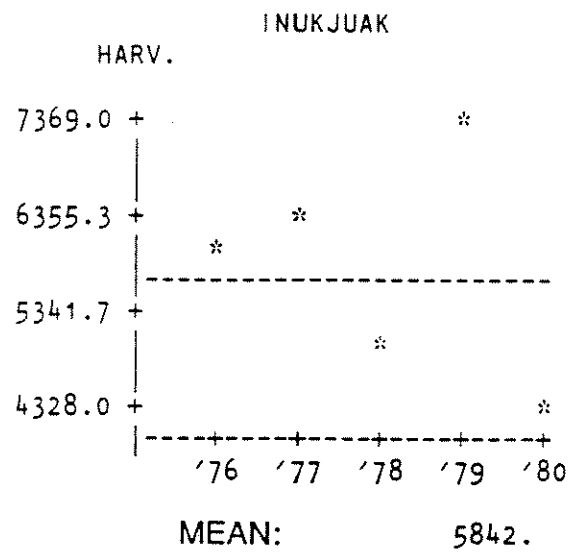
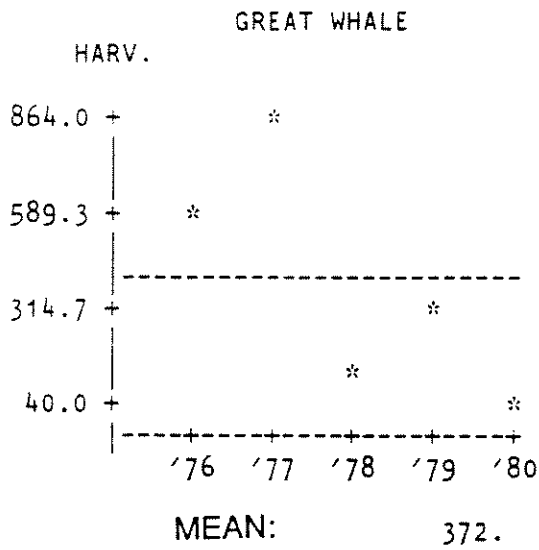
LAKE TROUT, WINTER



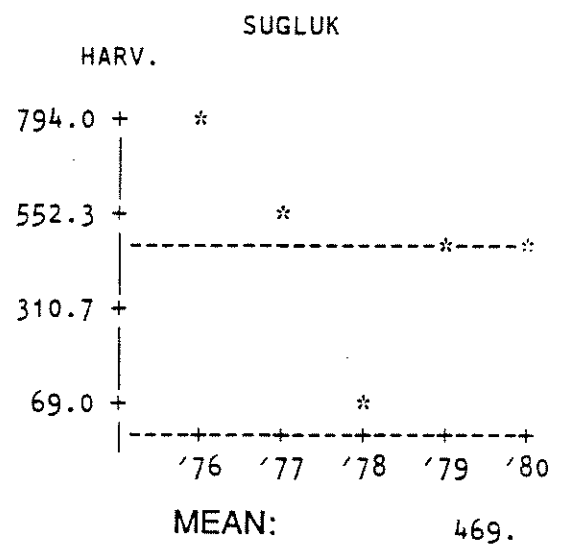
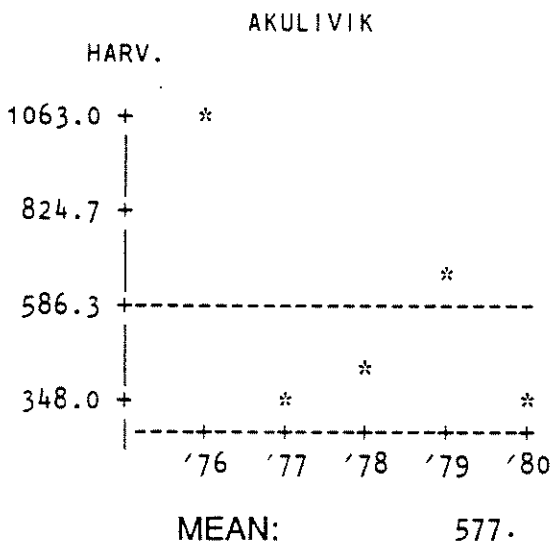
LAKE TROUT, WINTER



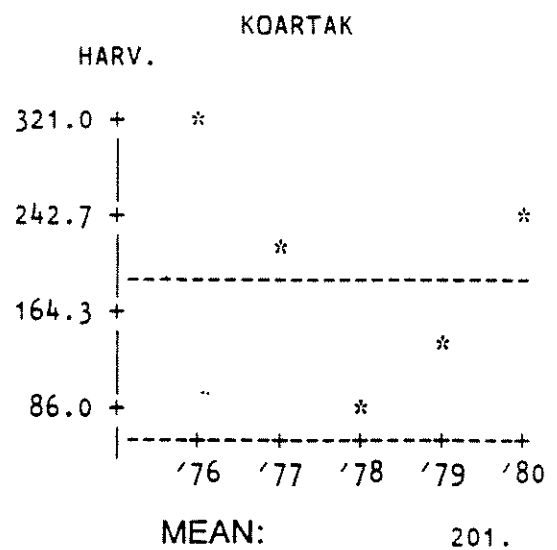
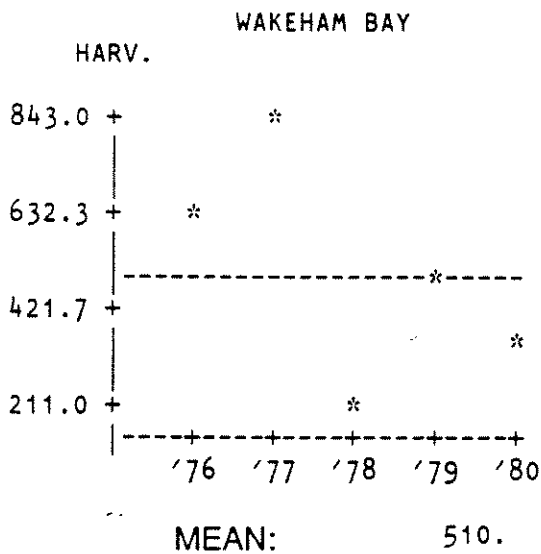
LAKE TROUT, WINTER



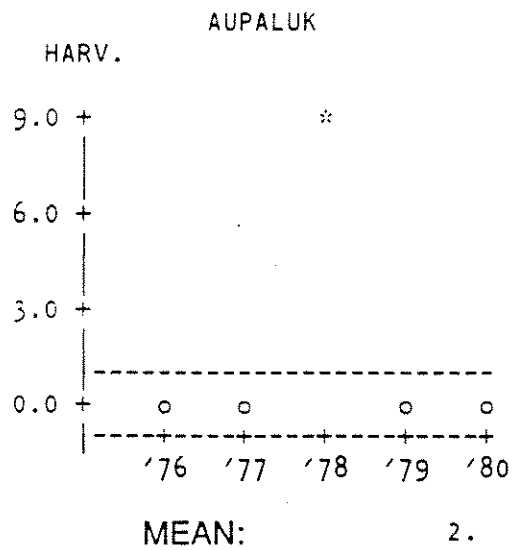
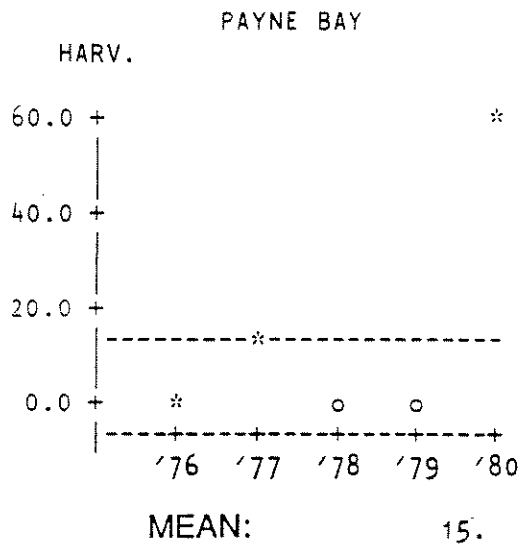
LAKE TROUT, WINTER



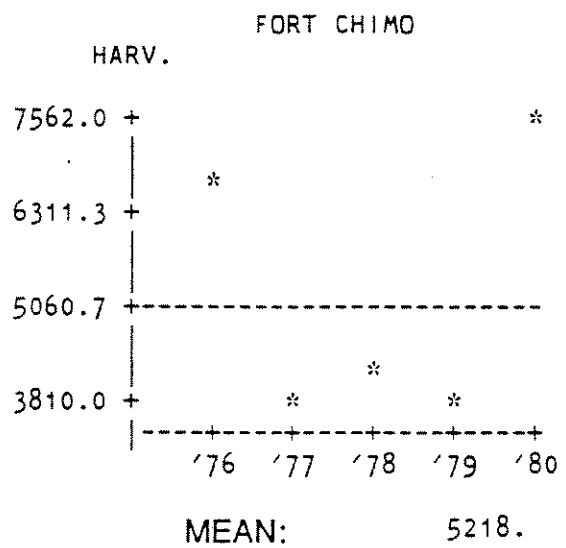
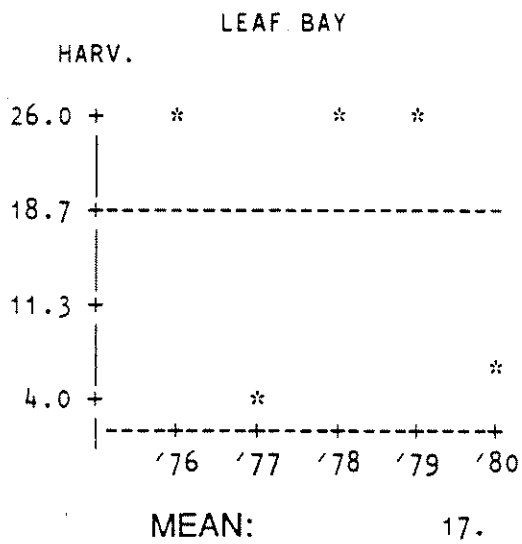
LAKE TROUT, WINTER



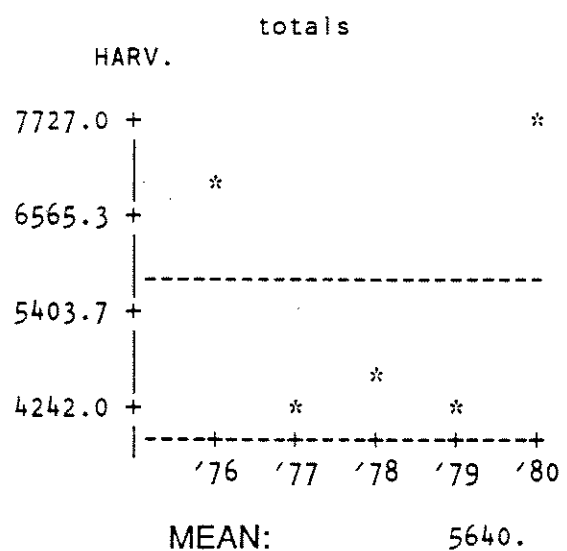
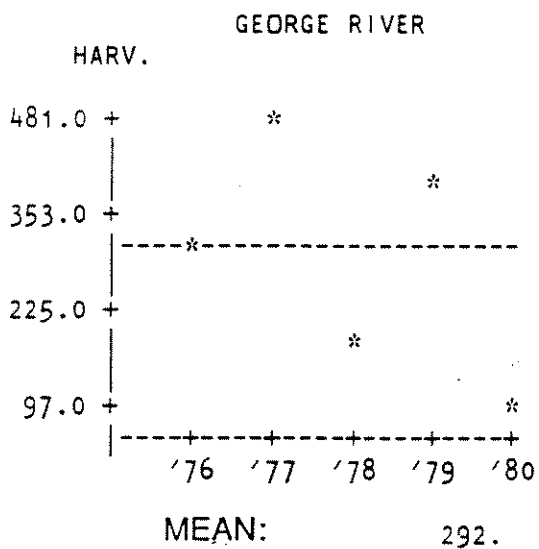
SALMON, FALL



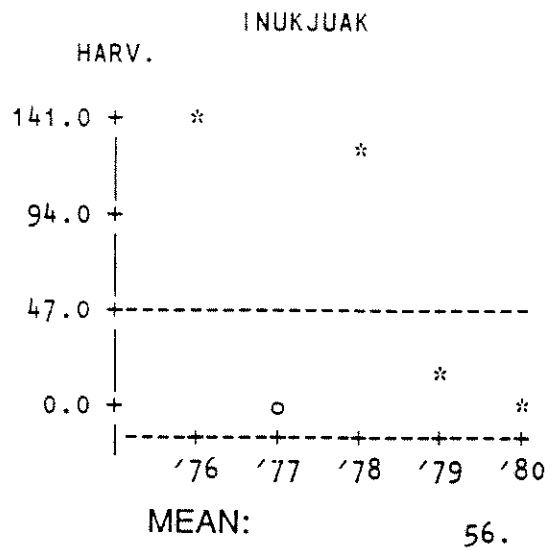
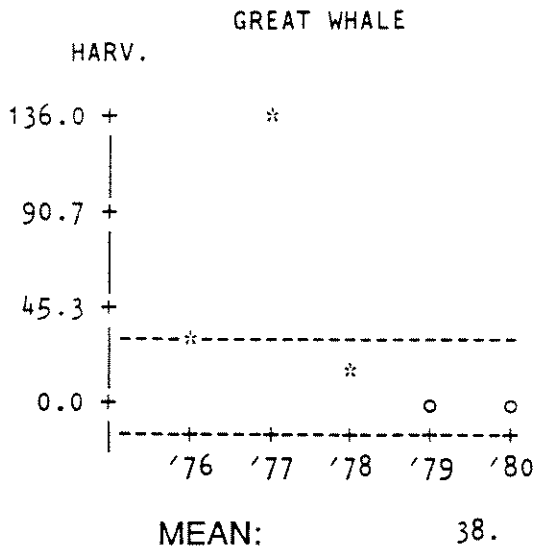
SALMON, FALL



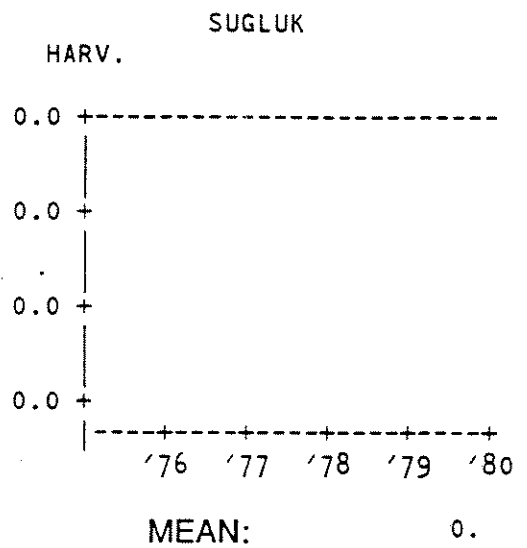
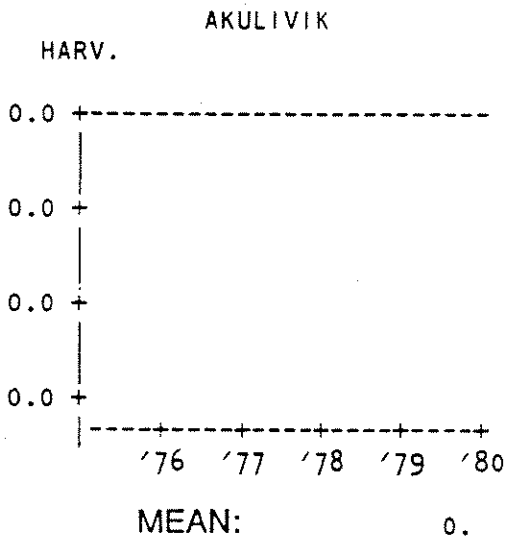
SALMON, FALL



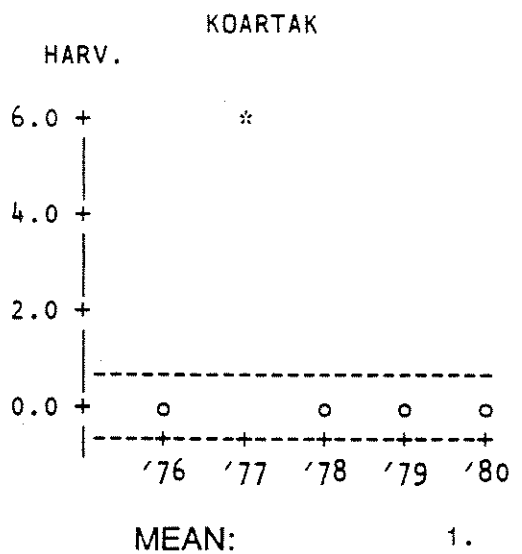
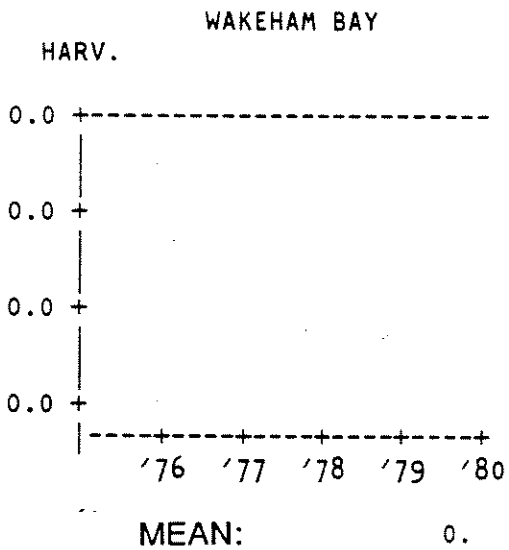
SALMON, FALL



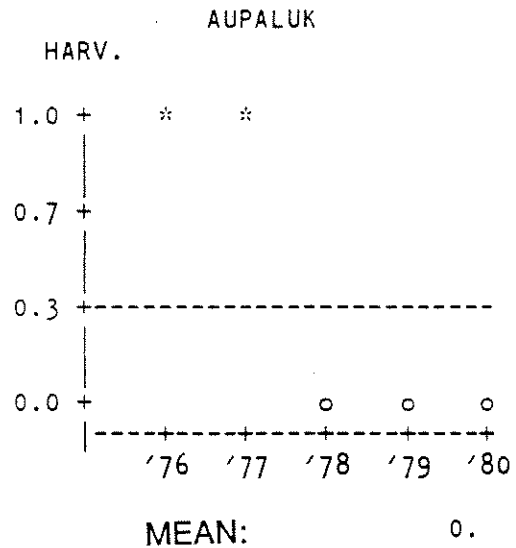
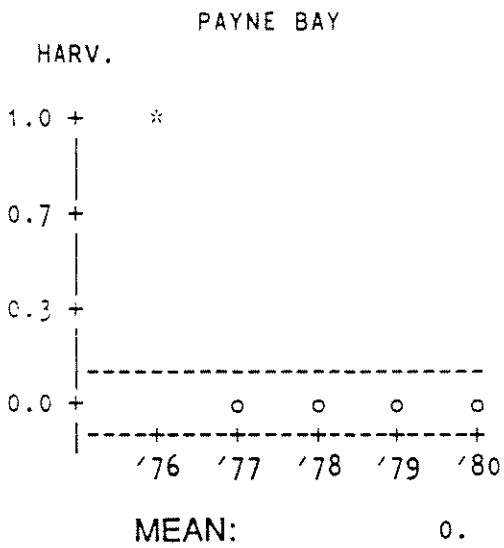
SALMON, FALL



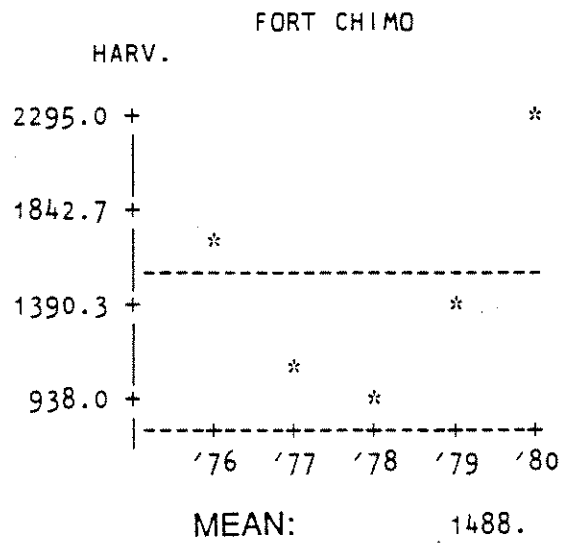
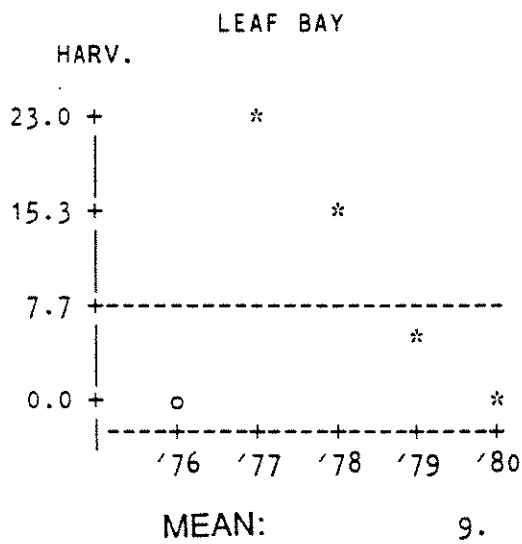
SALMON, FALL



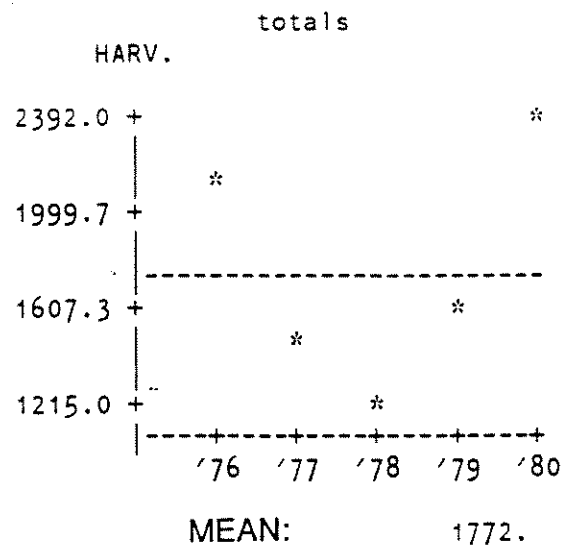
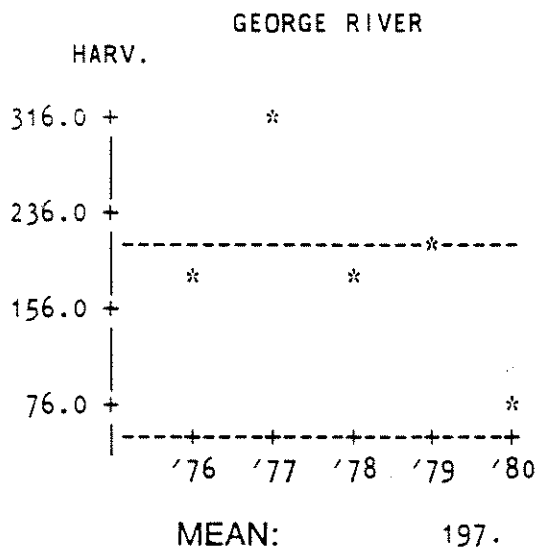
SALMON, SUMMER



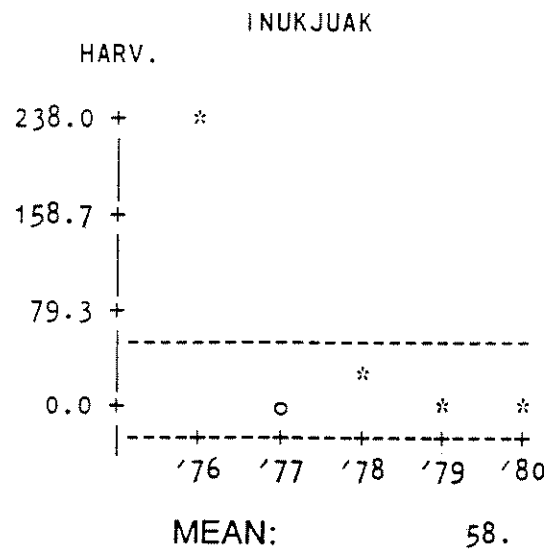
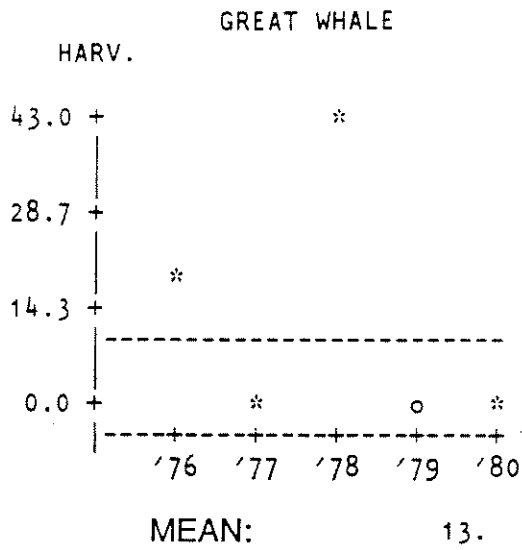
SALMON, SUMMER



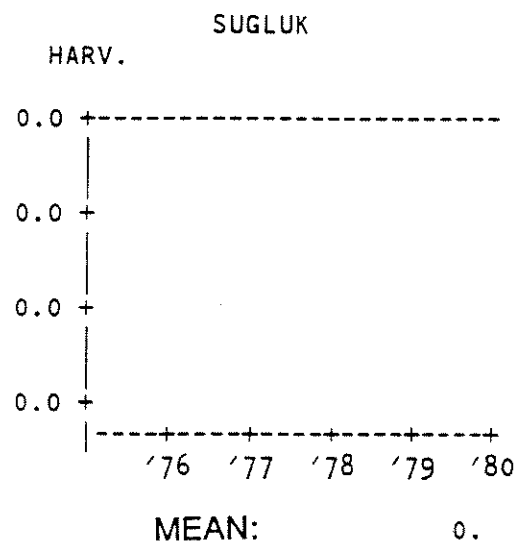
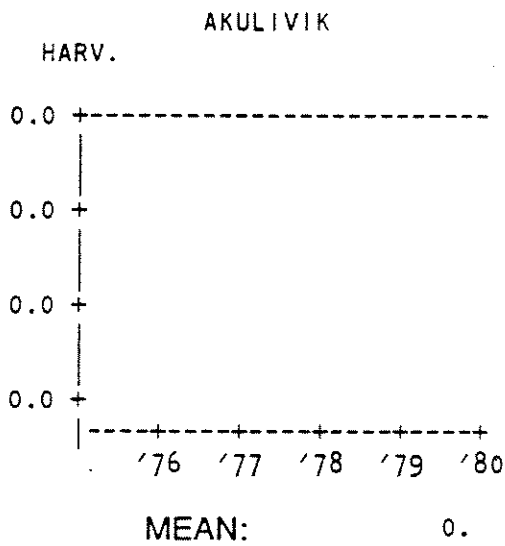
SALMON, SUMMER



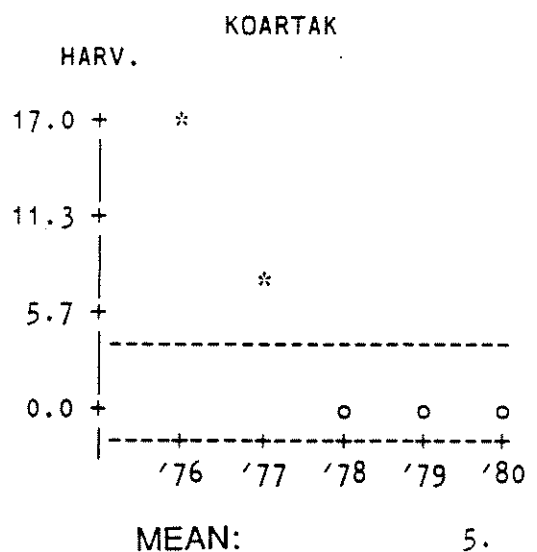
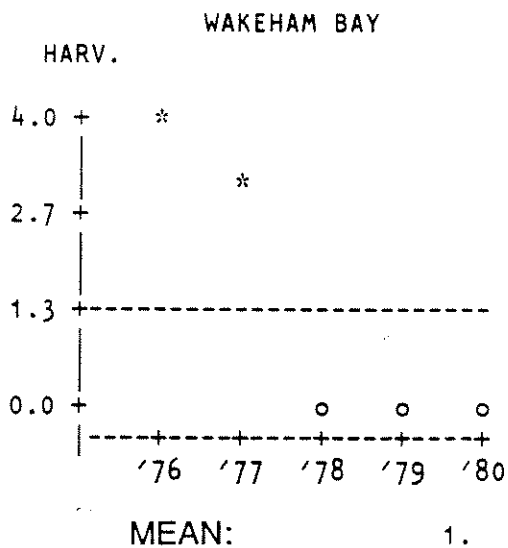
SALMON, SUMMER



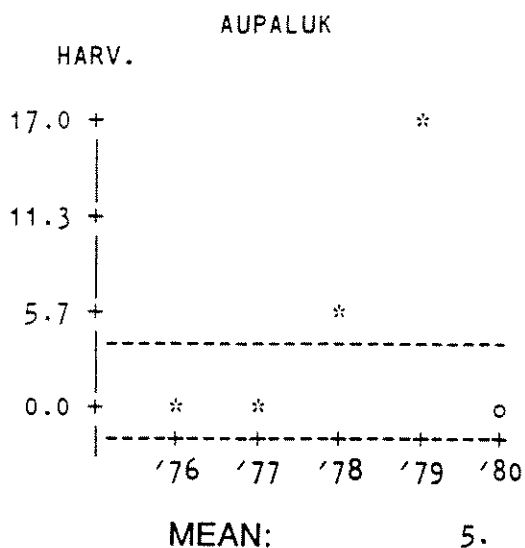
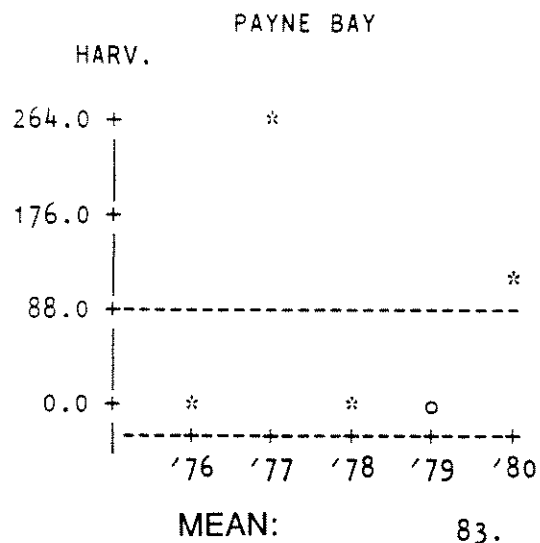
SALMON, SUMMER



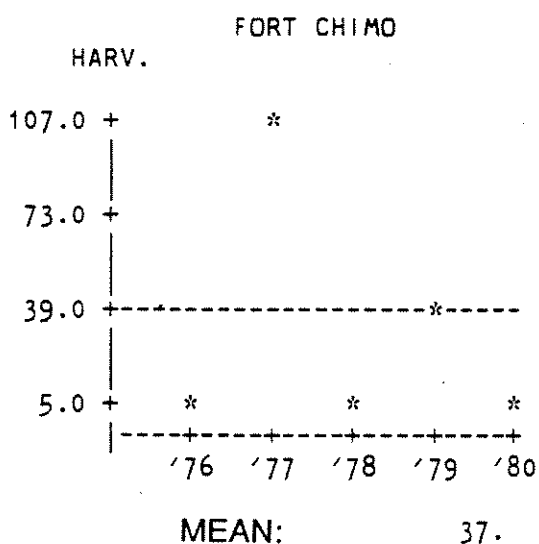
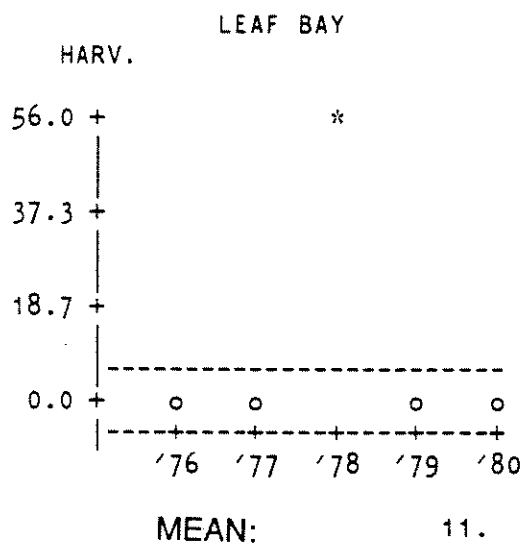
SALMON, SUMMER



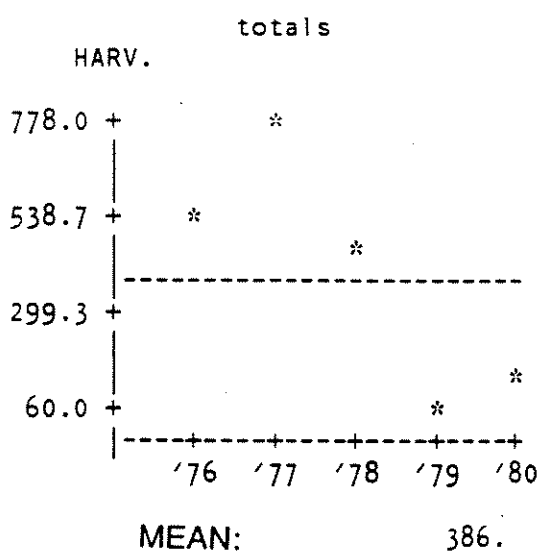
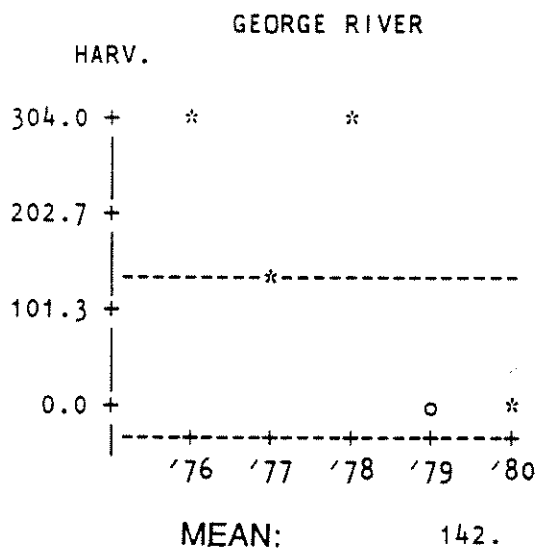
SALMON, WINTER



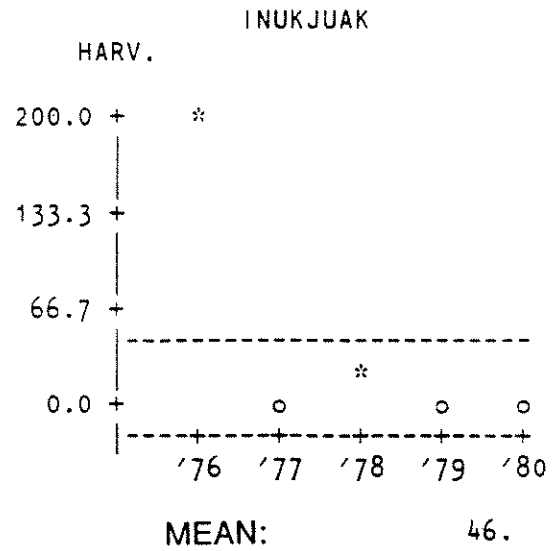
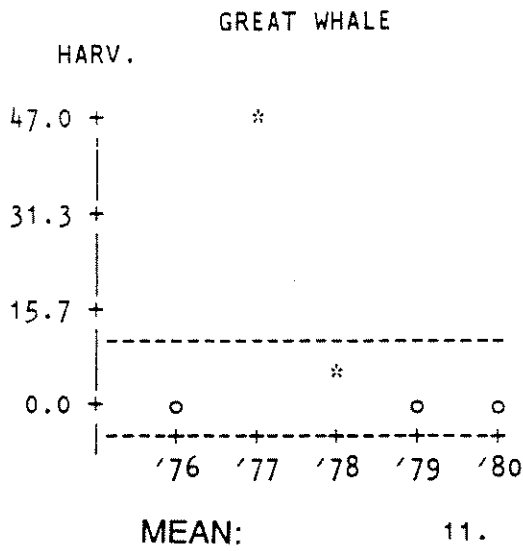
SALMON, WINTER



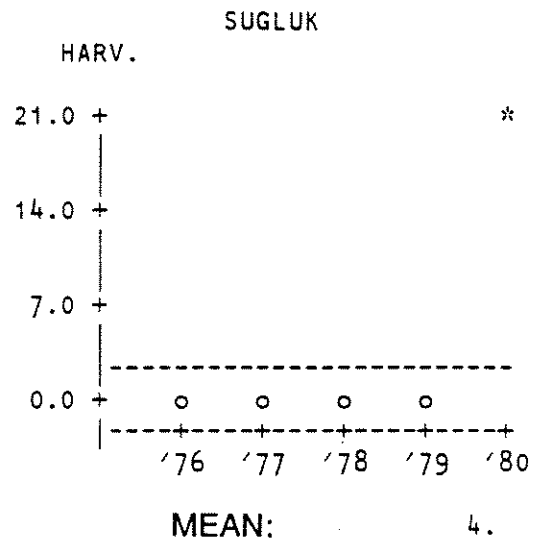
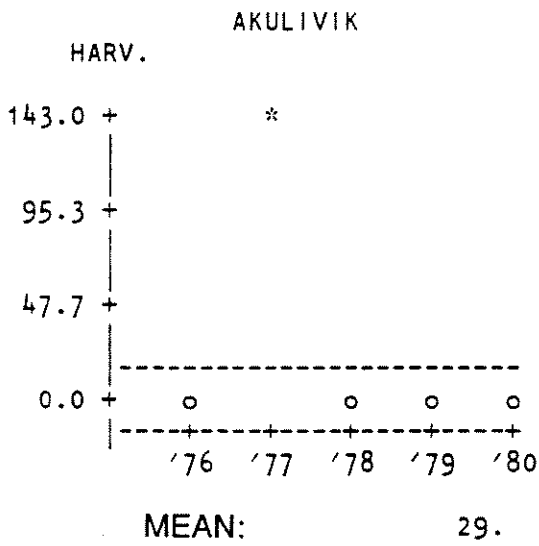
SALMON, WINTER



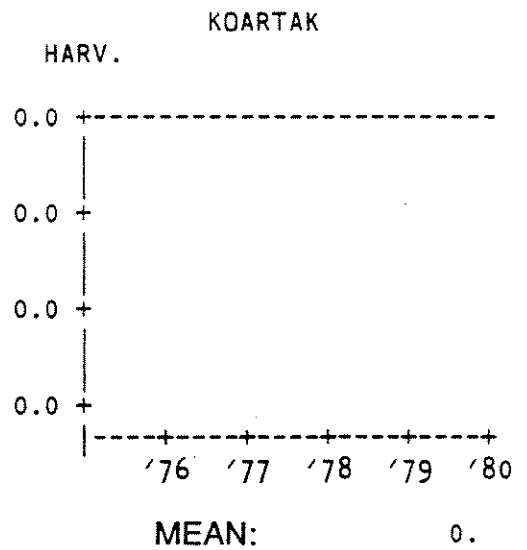
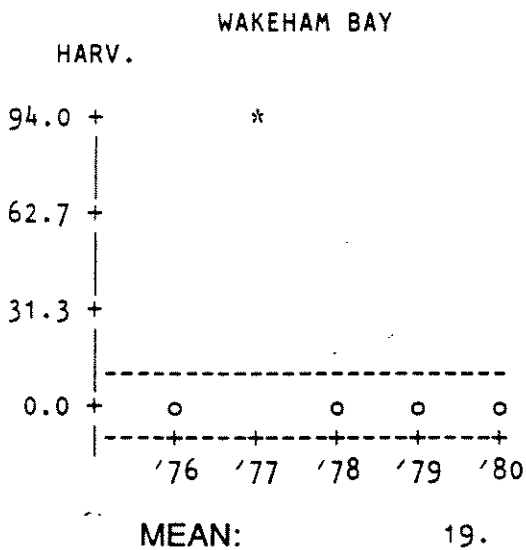
SALMON, WINTER



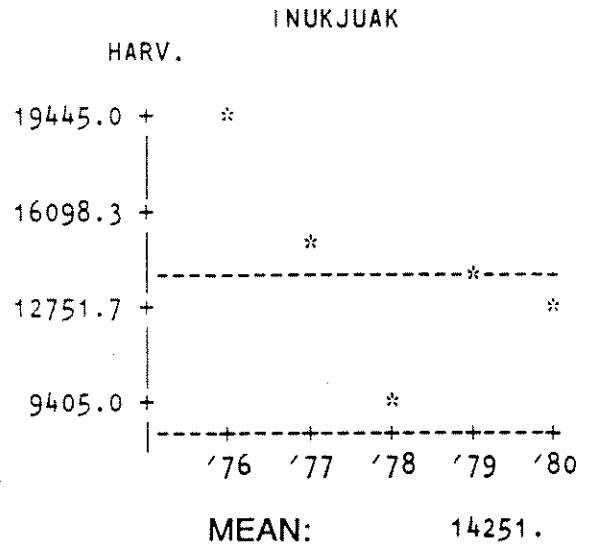
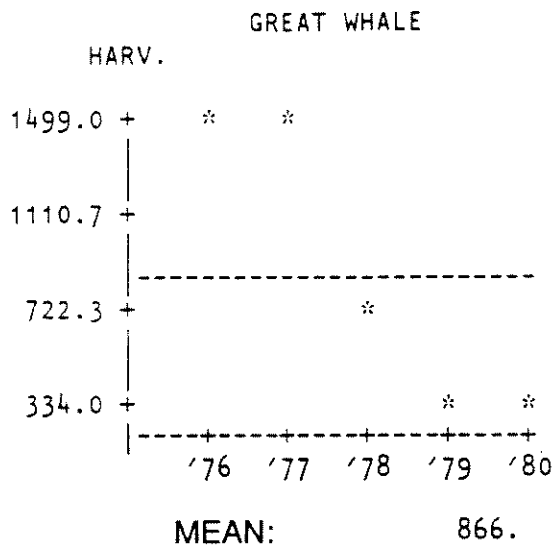
SALMON, WINTER



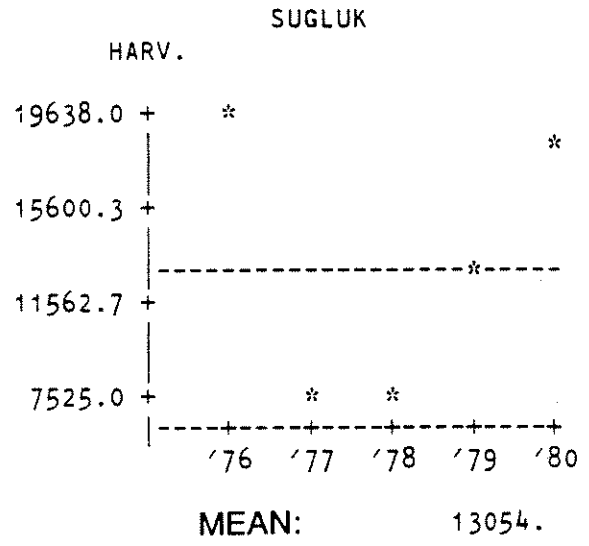
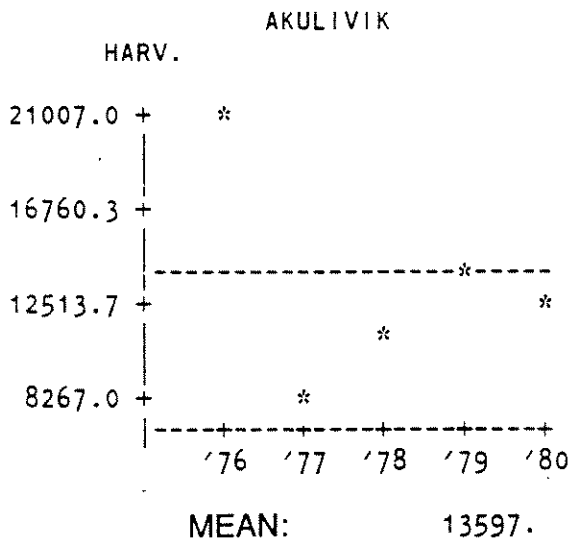
SALMON, WINTER



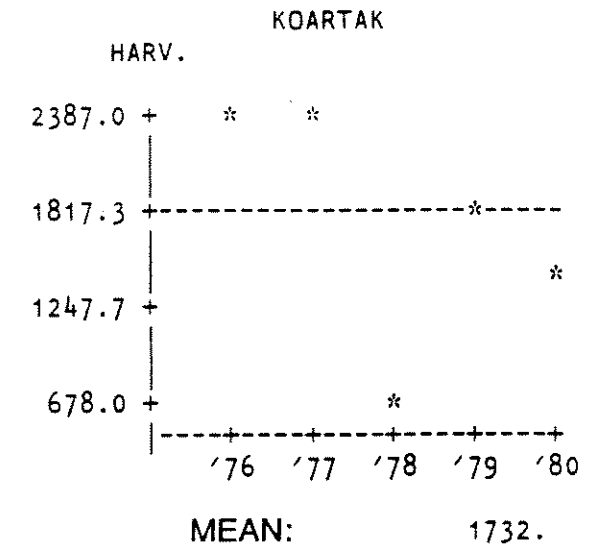
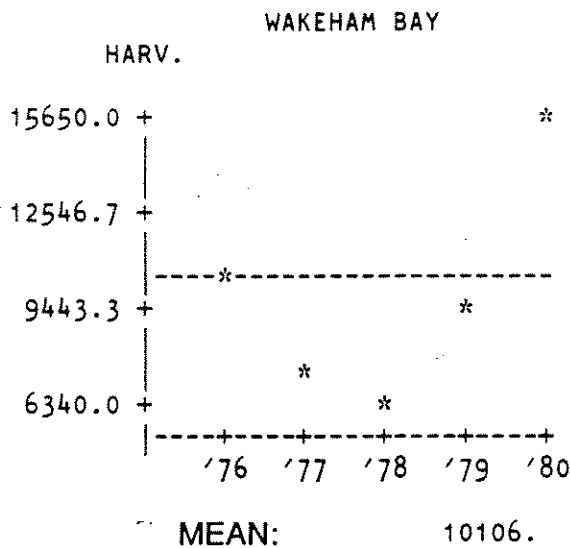
TOTAL ARCTIC CHAR



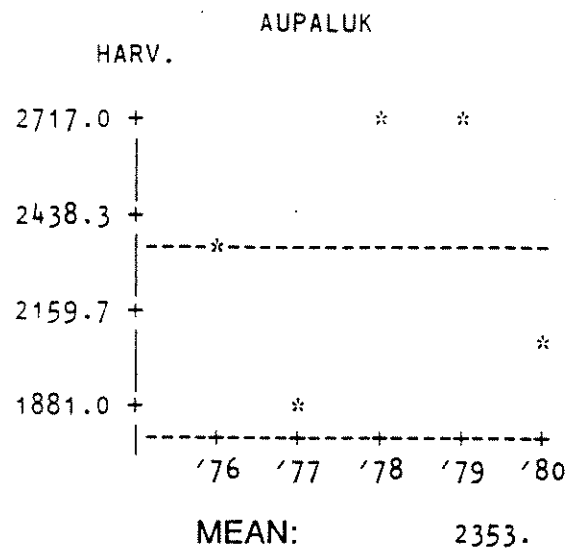
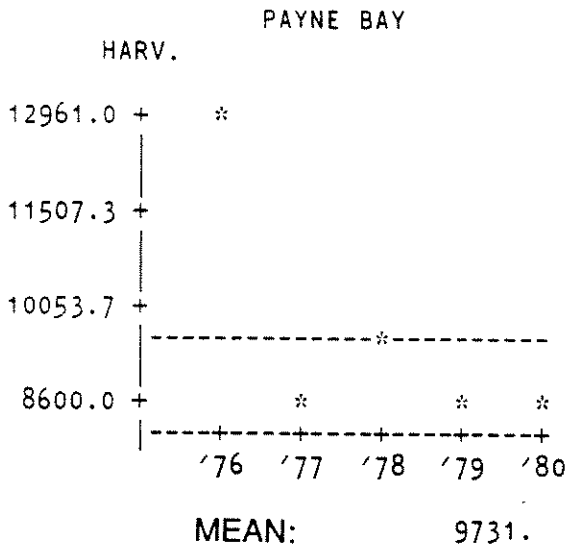
TOTAL ARCTIC CHAR



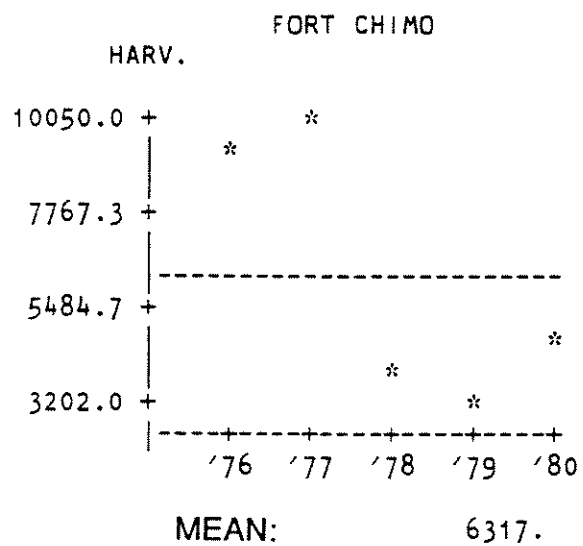
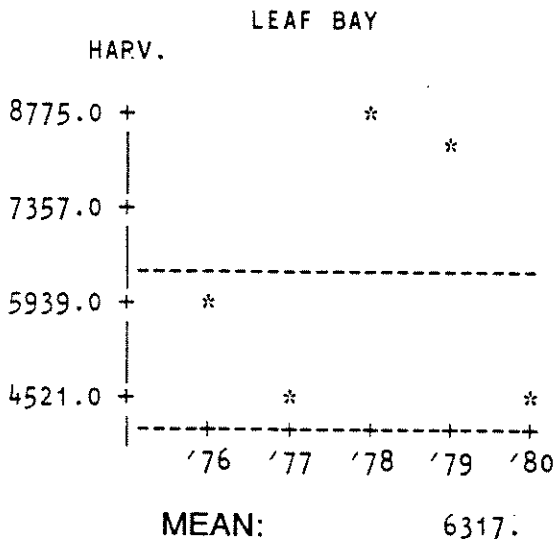
TOTAL ARCTIC CHAR



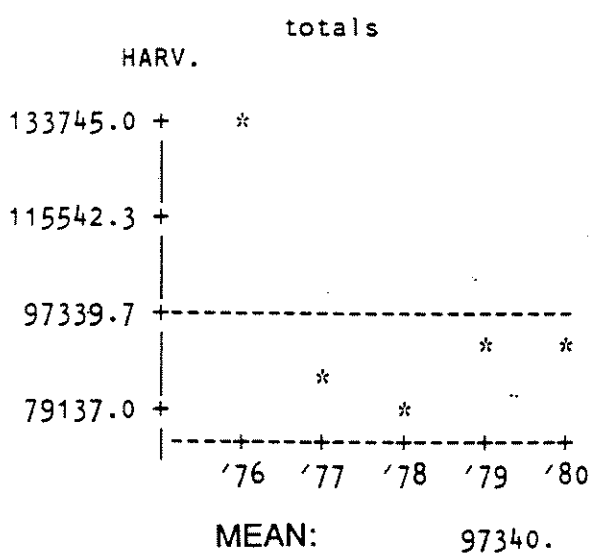
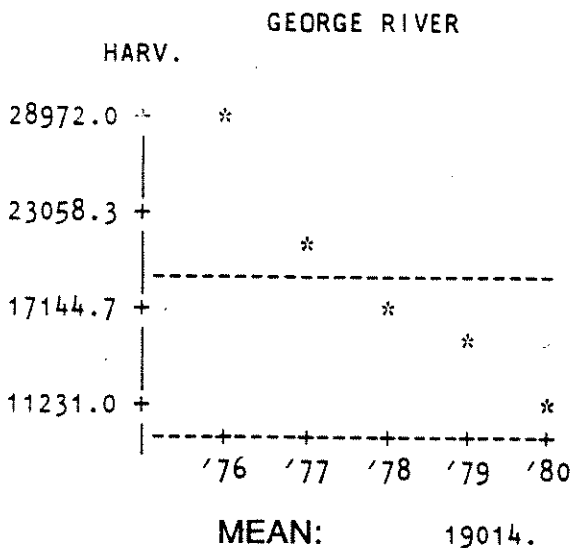
TOTAL ARCTIC CHAR



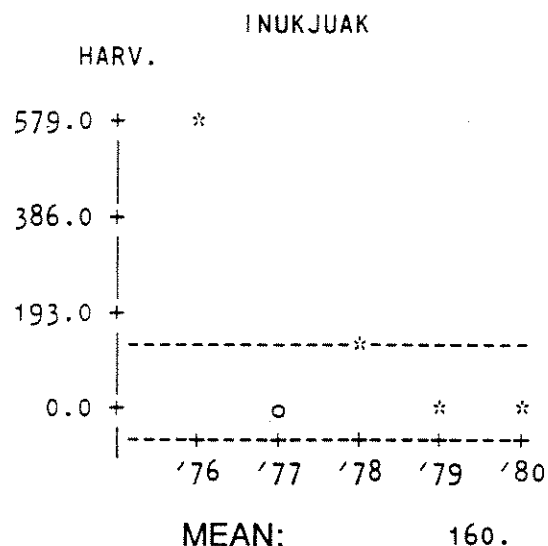
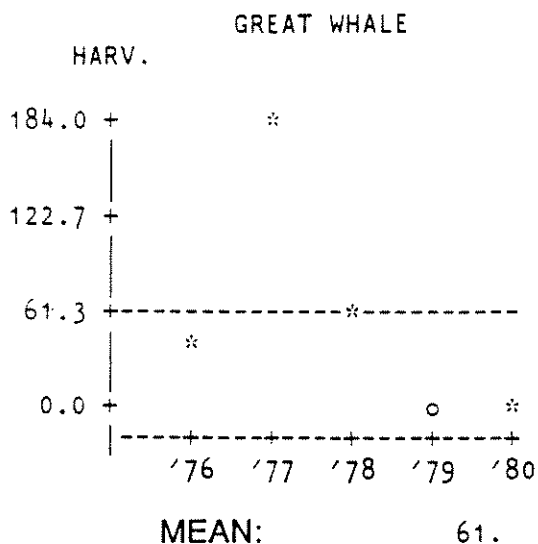
TOTAL ARCTIC CHAR



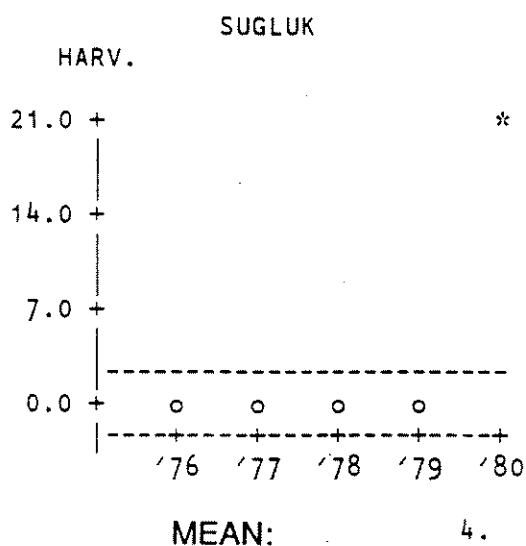
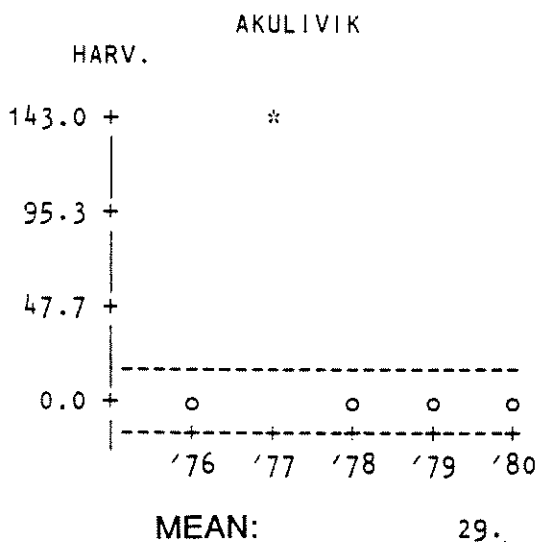
TOTAL ARCTIC CHAR



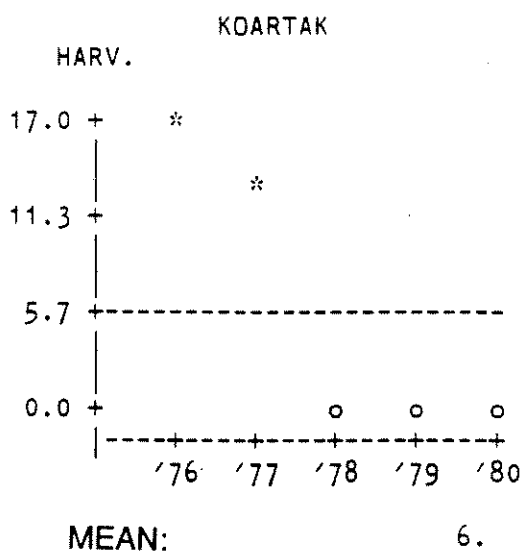
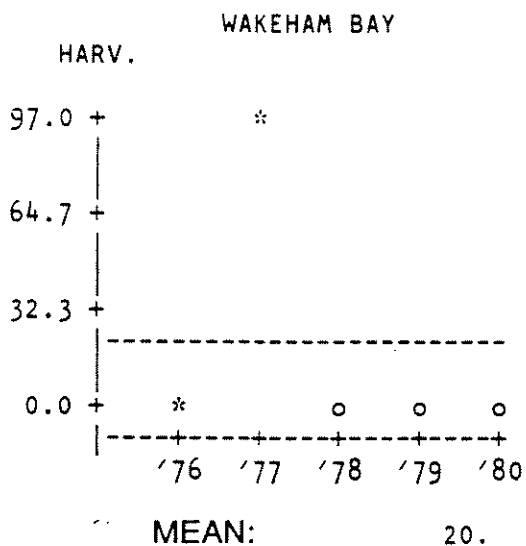
TOTAL SALMON



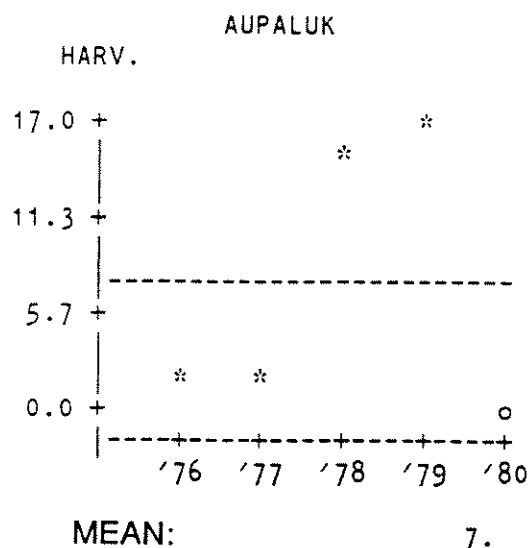
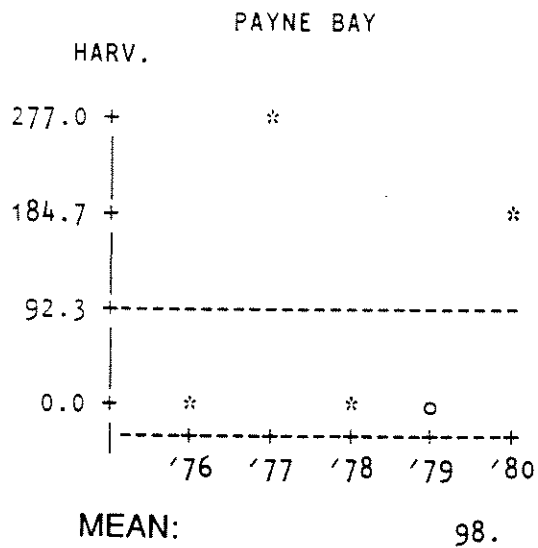
TOTAL SALMON



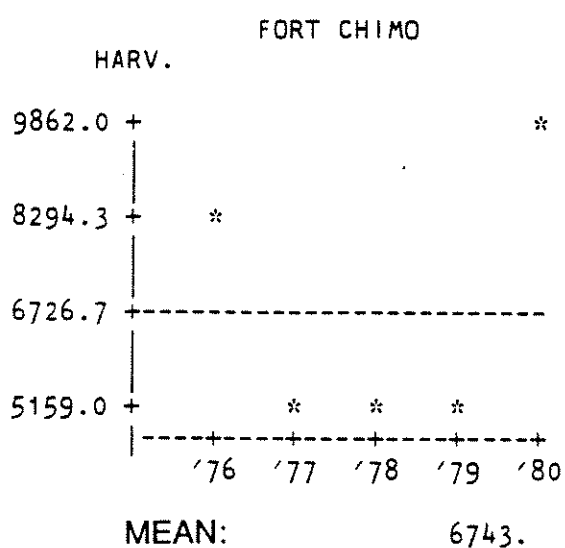
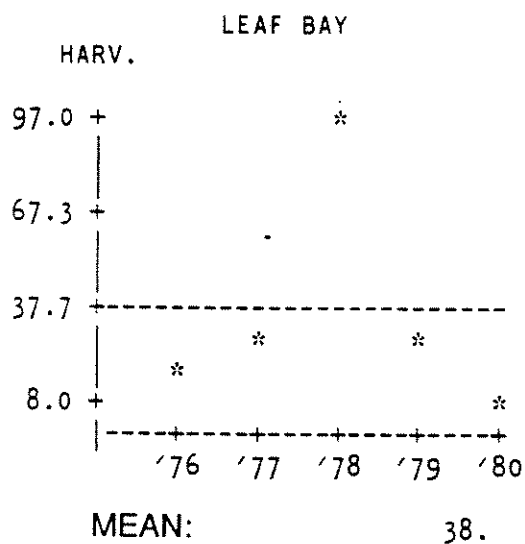
TOTAL SALMON



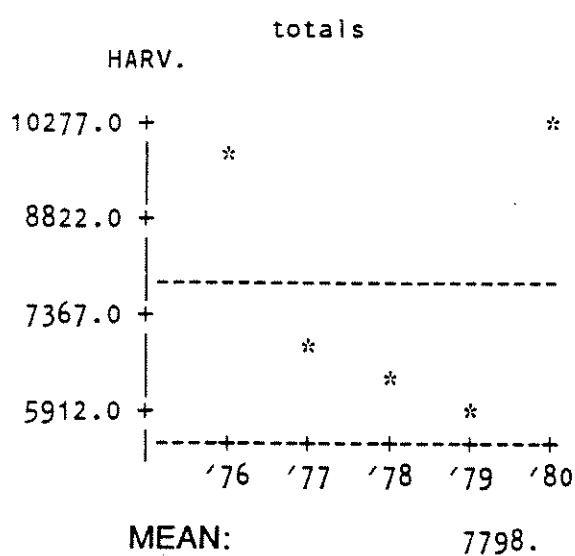
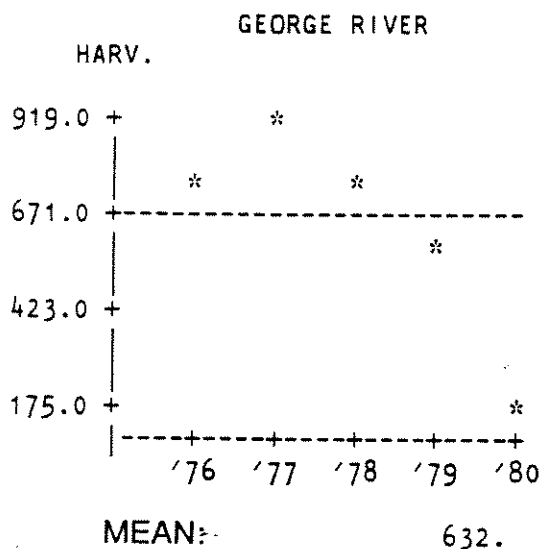
TOTAL SALMON



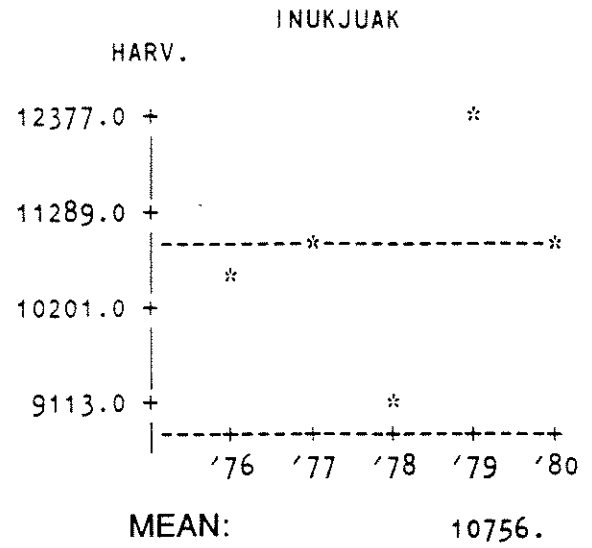
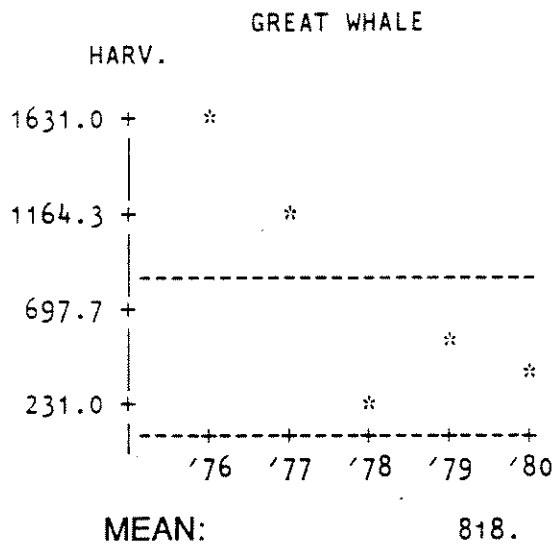
TOTAL SALMON



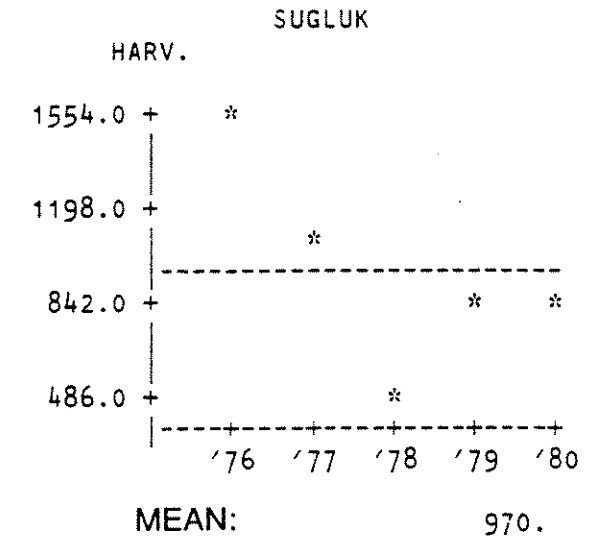
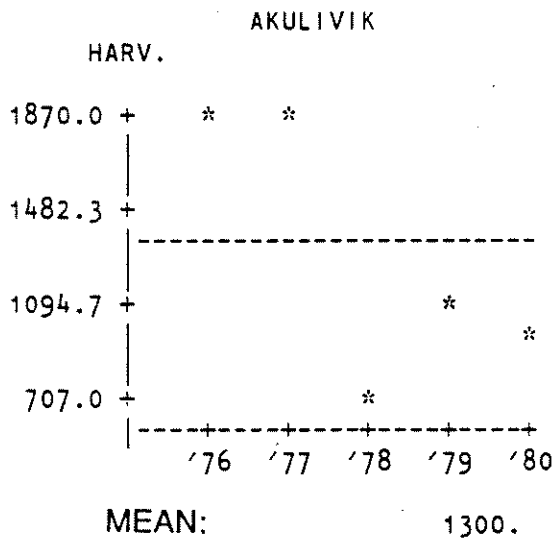
TOTAL SALMON



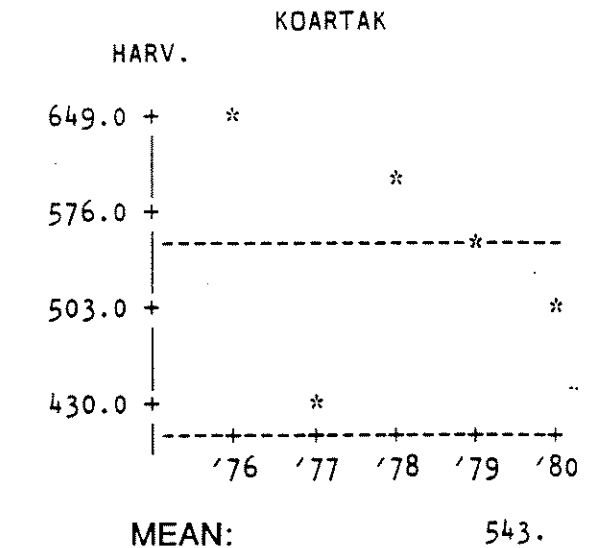
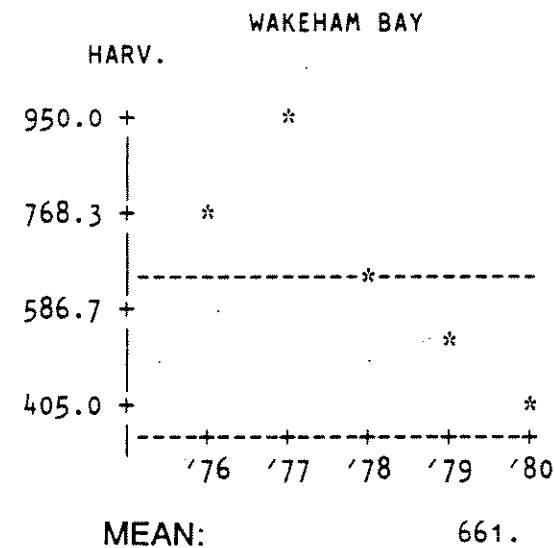
TOTAL LAKE TROUT



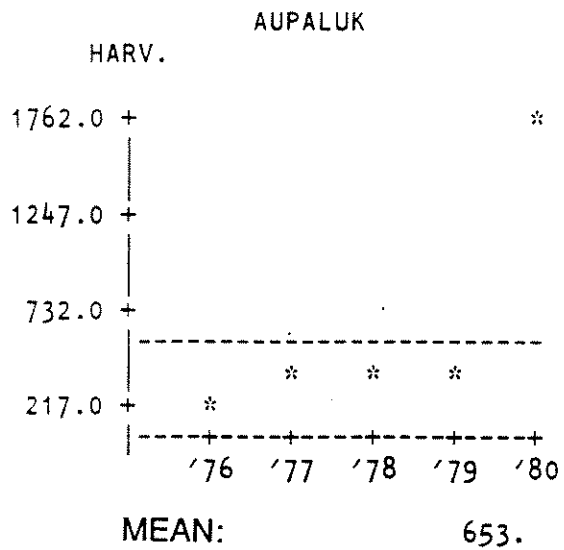
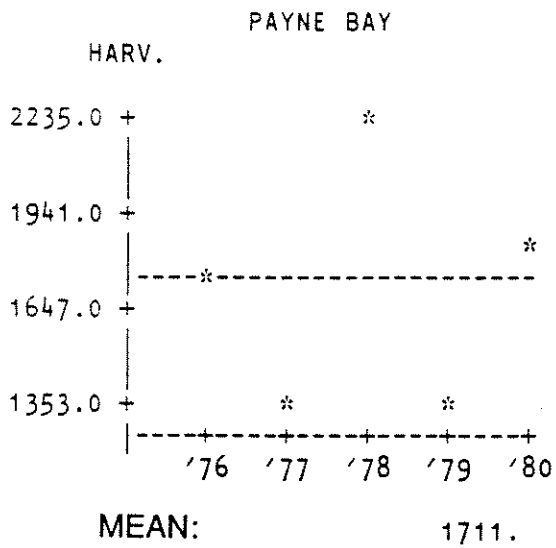
TOTAL LAKE TROUT



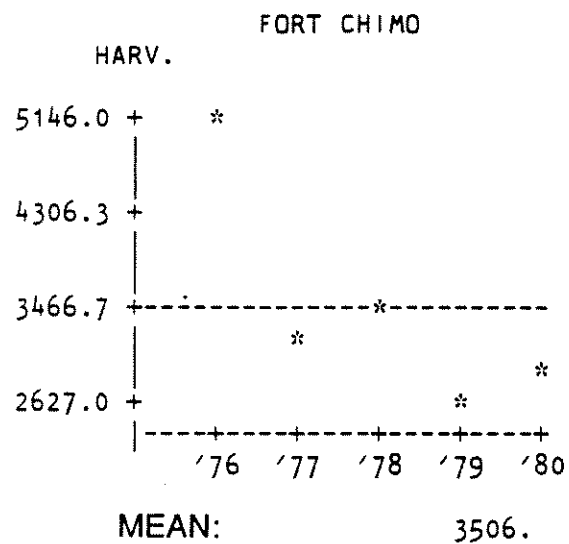
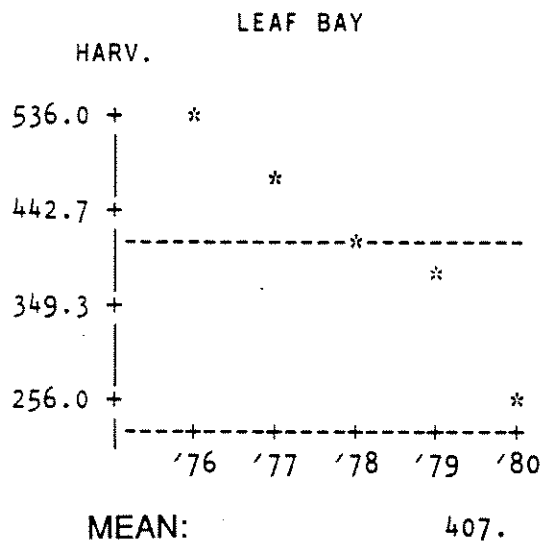
TOTAL LAKE TROUT



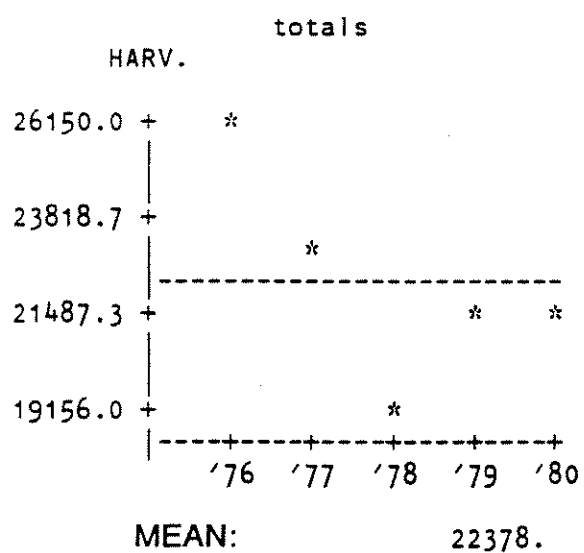
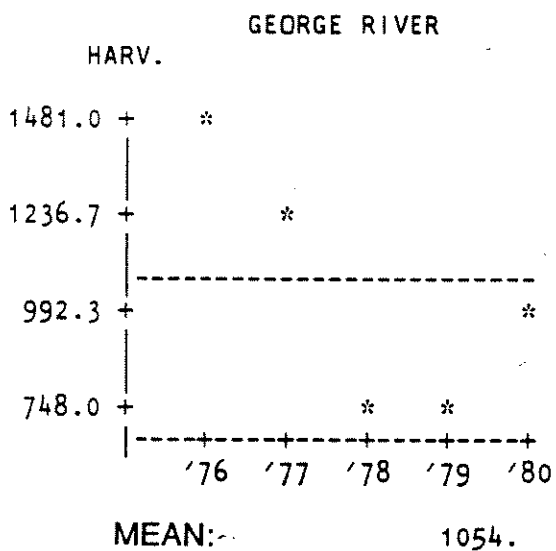
TOTAL LAKE TROUT



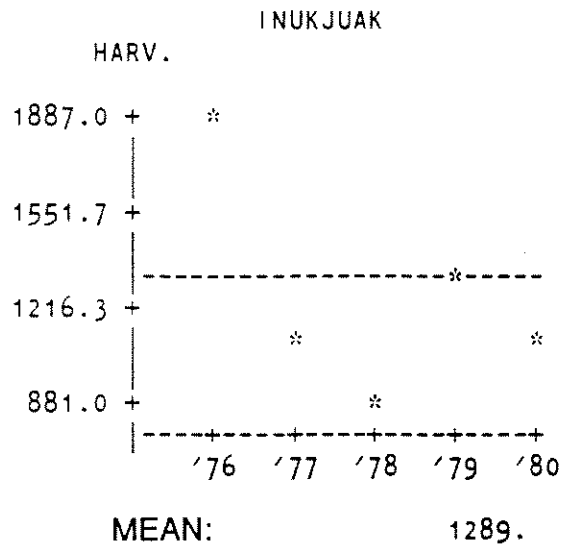
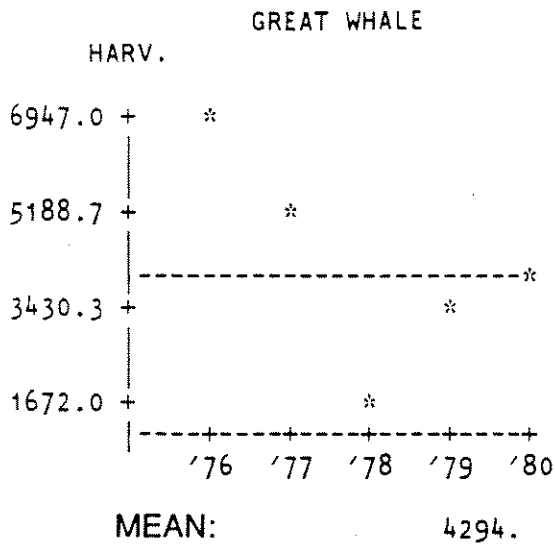
TOTAL LAKE TROUT



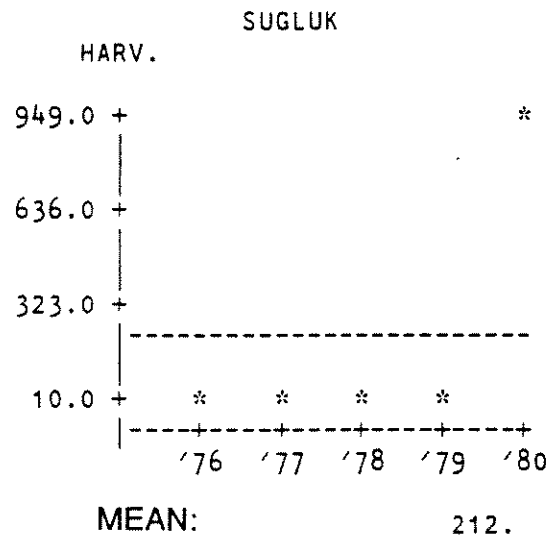
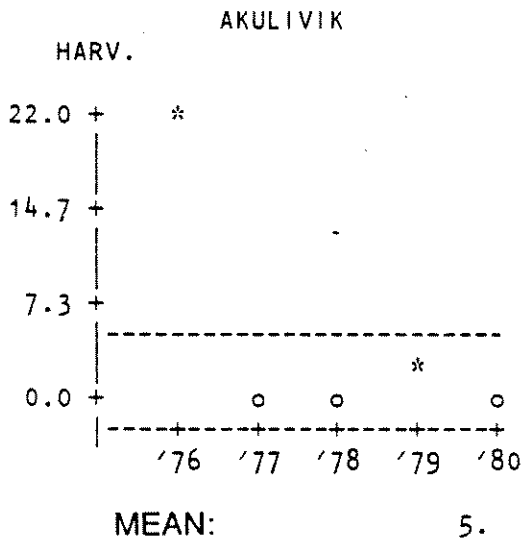
TOTAL LAKE TROUT



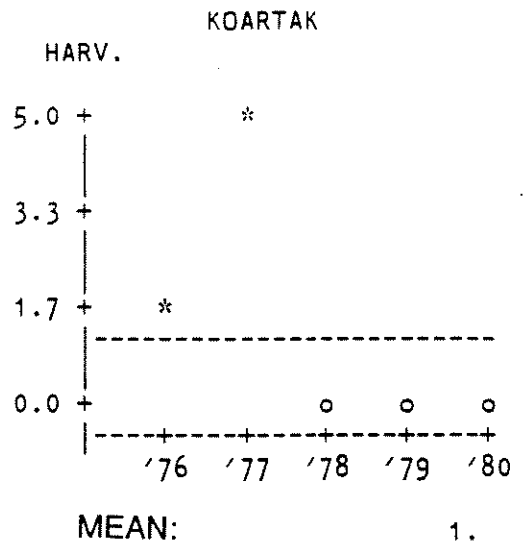
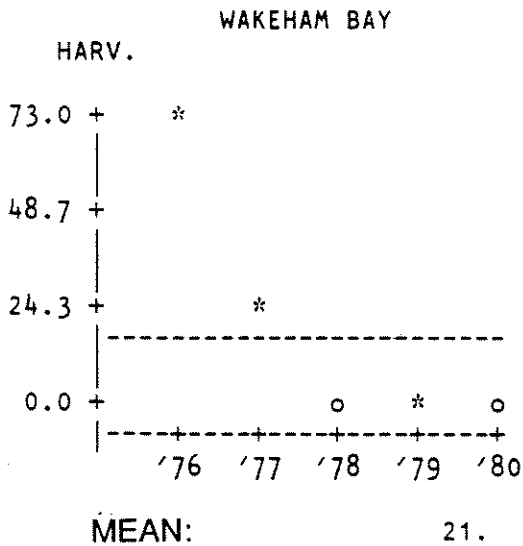
TOTAL BROOK TROUT



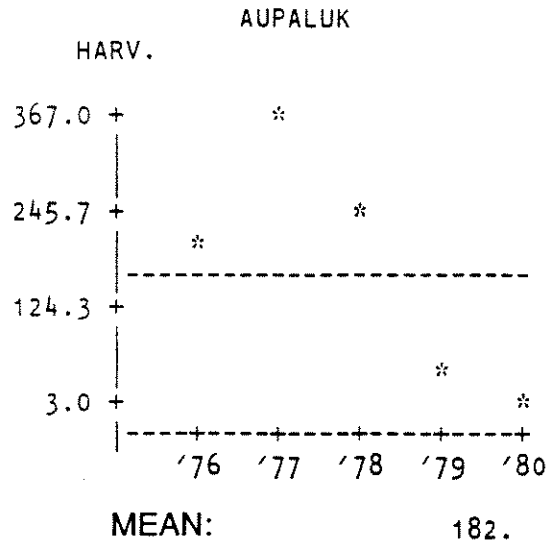
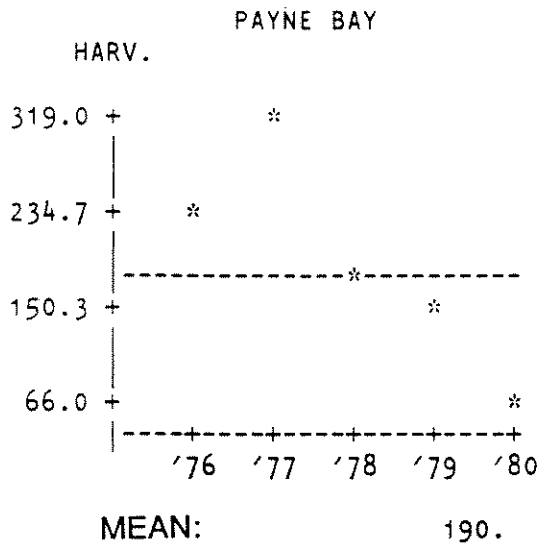
TOTAL BROOK TROUT



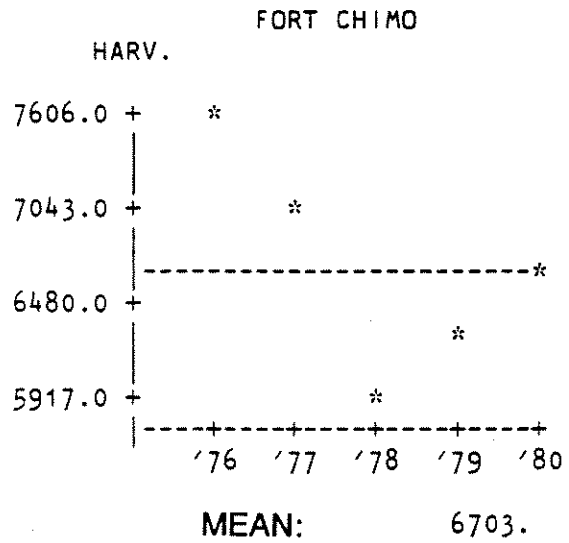
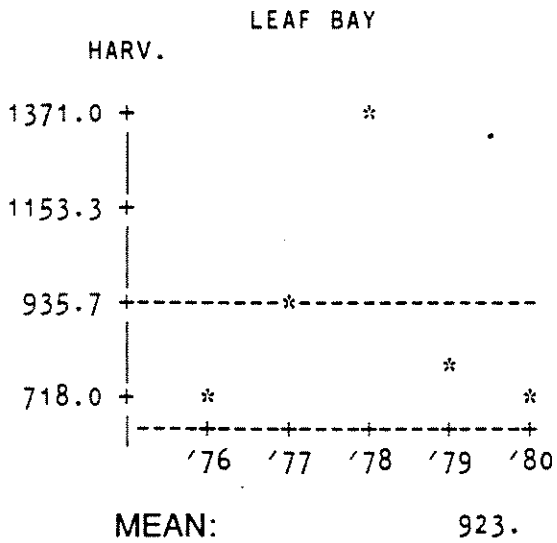
TOTAL BROOK TROUT



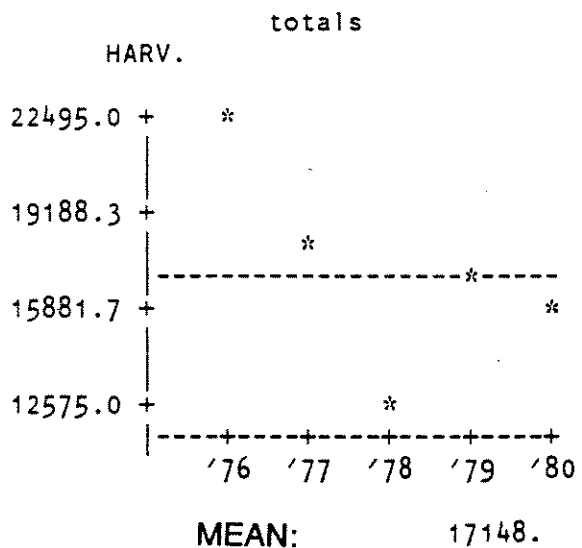
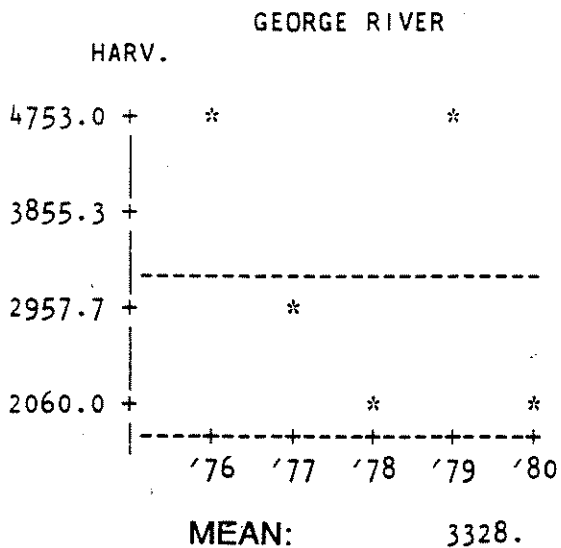
TOTAL BROOK TROUT



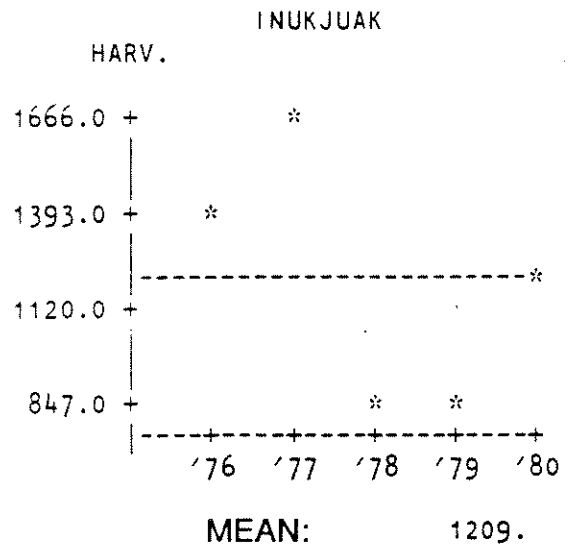
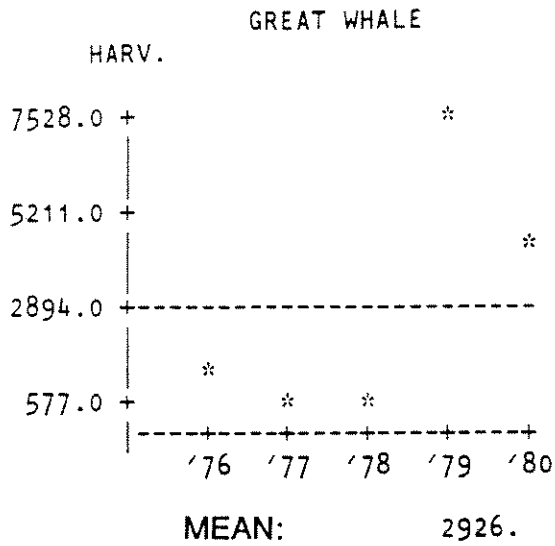
TOTAL BROOK TROUT



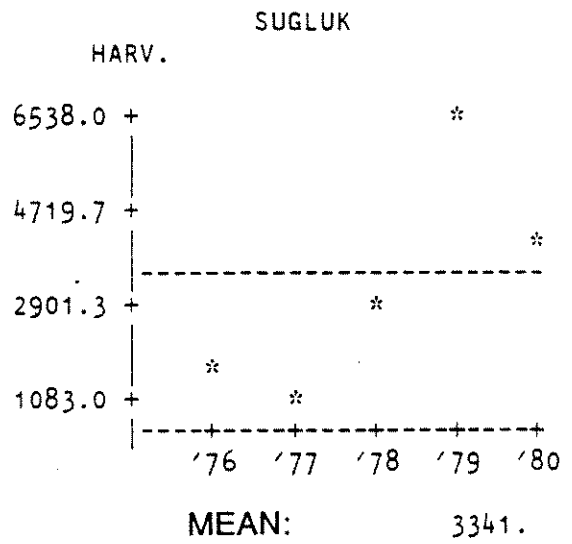
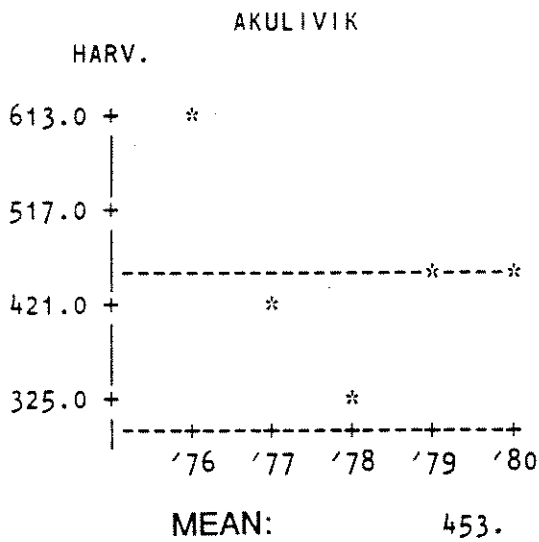
TOTAL BROOK TROUT



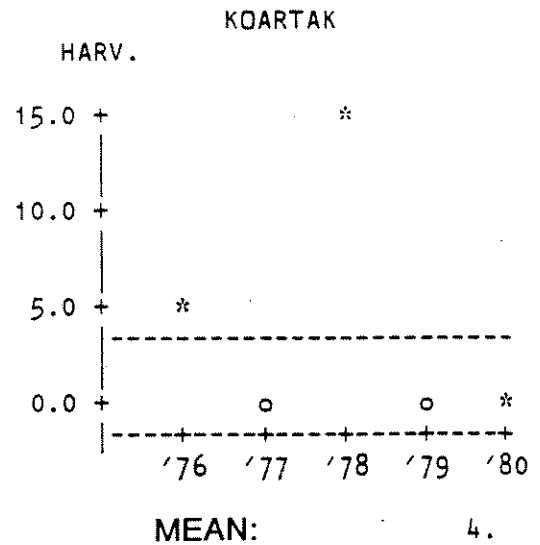
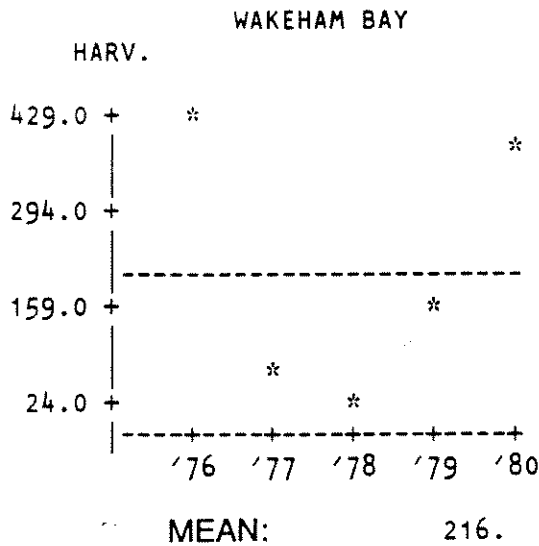
TOTAL SNOW GOOSE



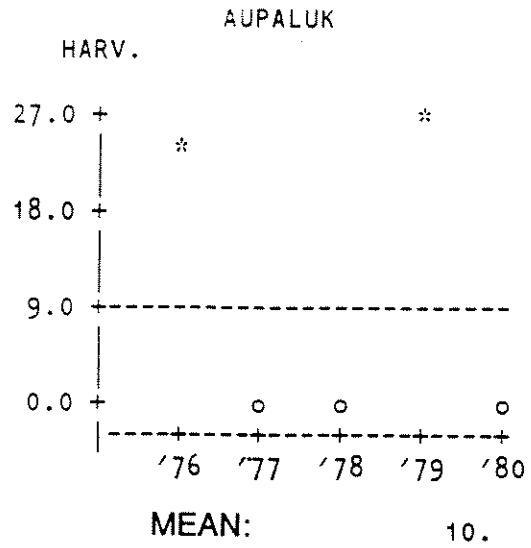
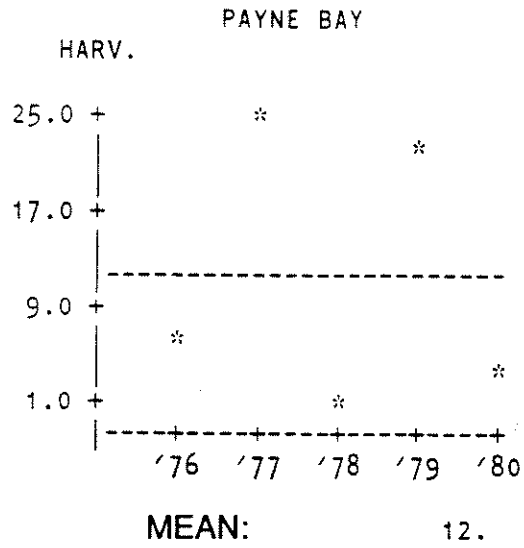
TOTAL SNOW GOOSE



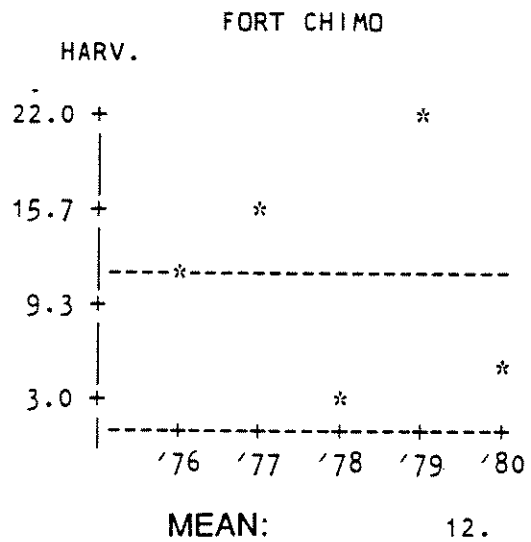
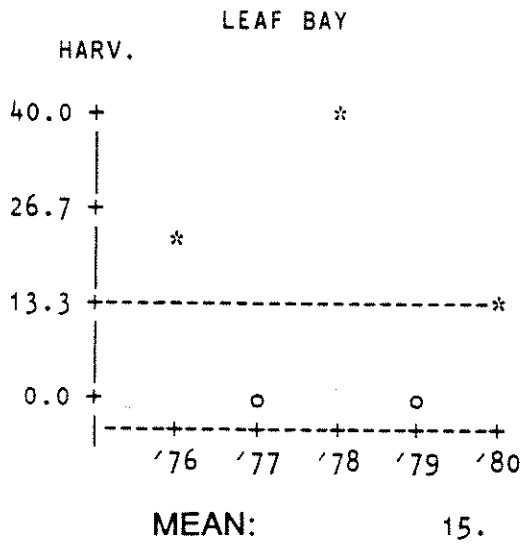
TOTAL SNOW GOOSE



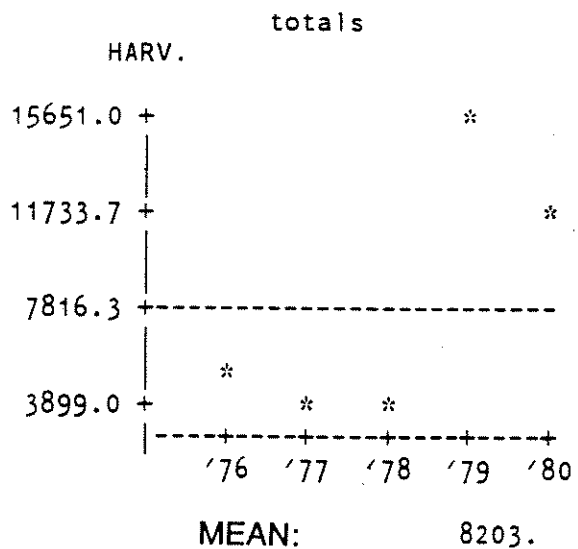
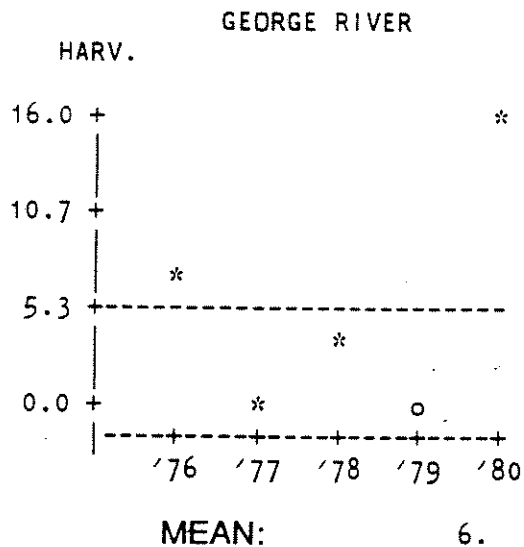
TOTAL SNOW GOOSE



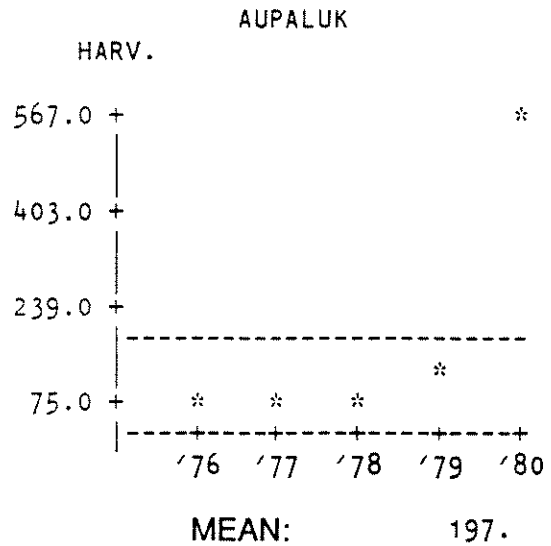
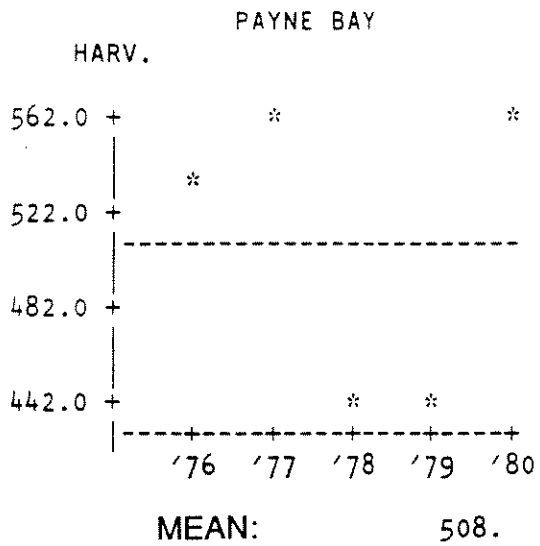
TOTAL SNOW GOOSE



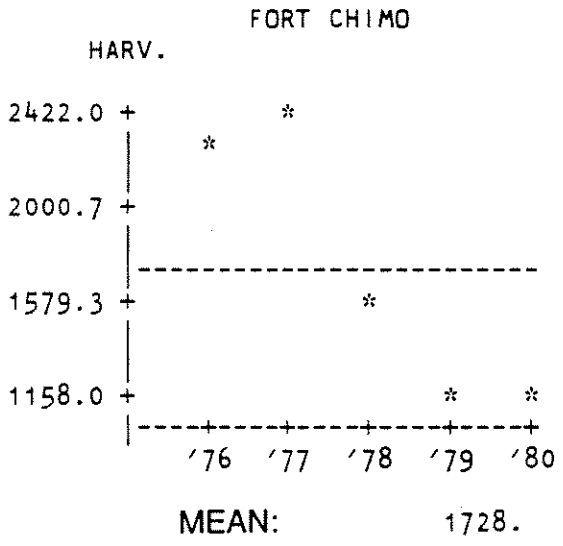
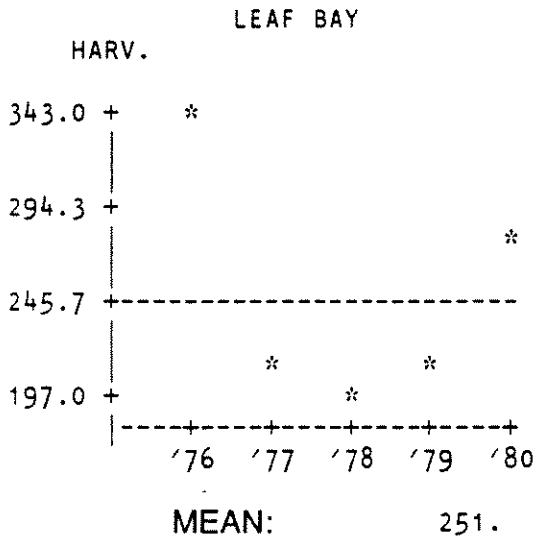
TOTAL SNOW GOOSE



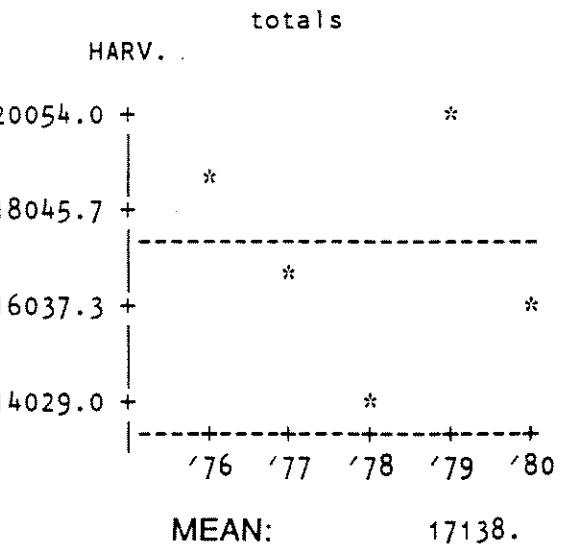
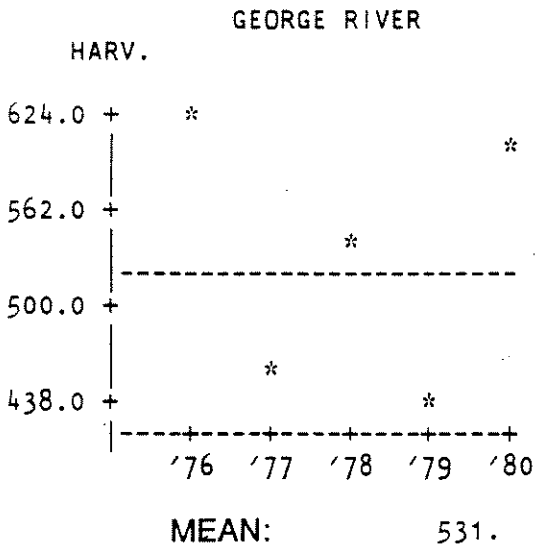
TOTAL CANADA GOOSE



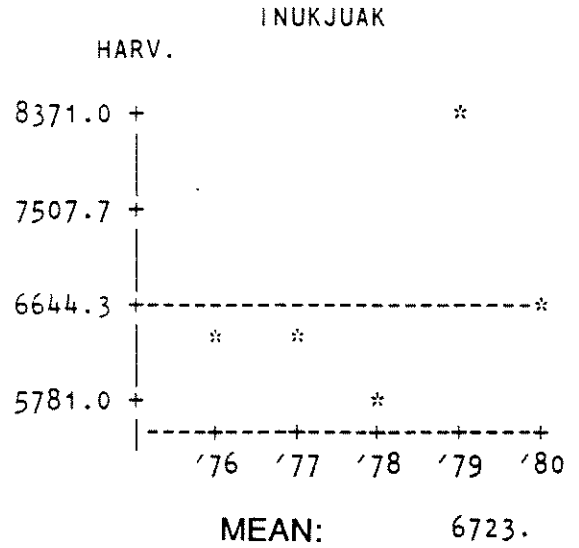
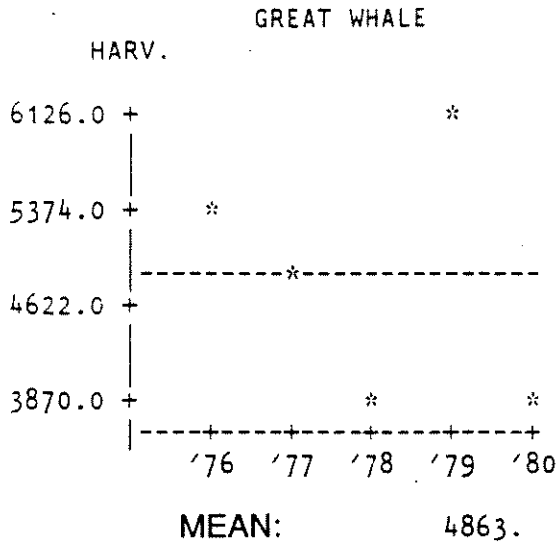
TOTAL CANADA GOOSE



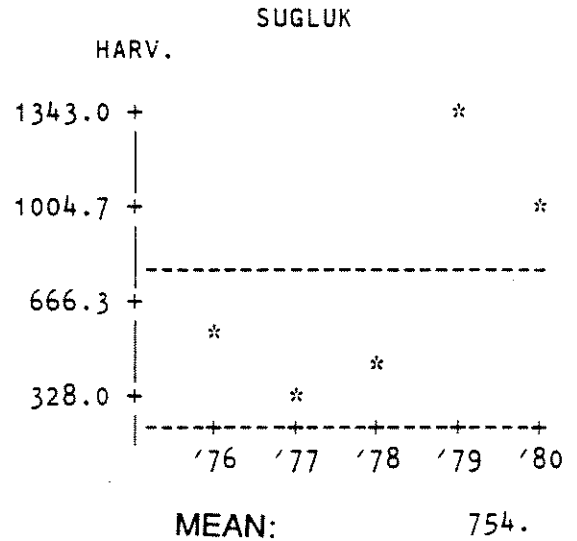
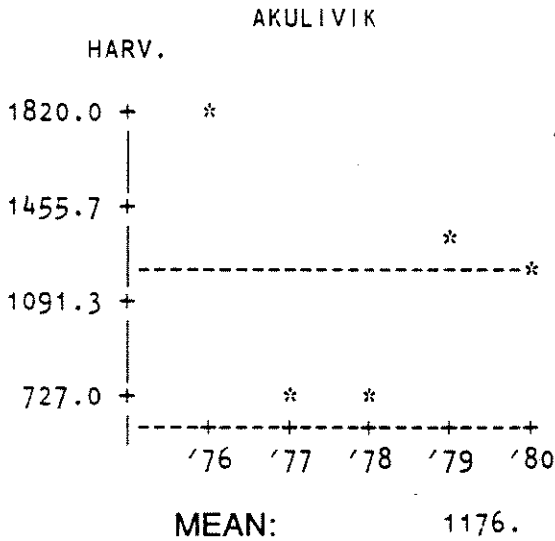
TOTAL CANADA GOOSE



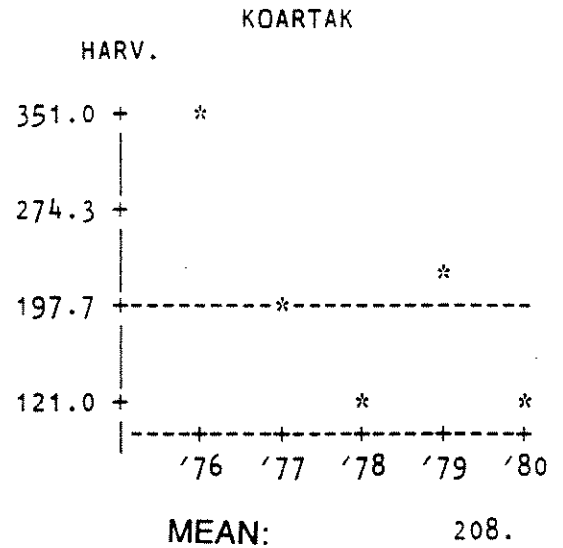
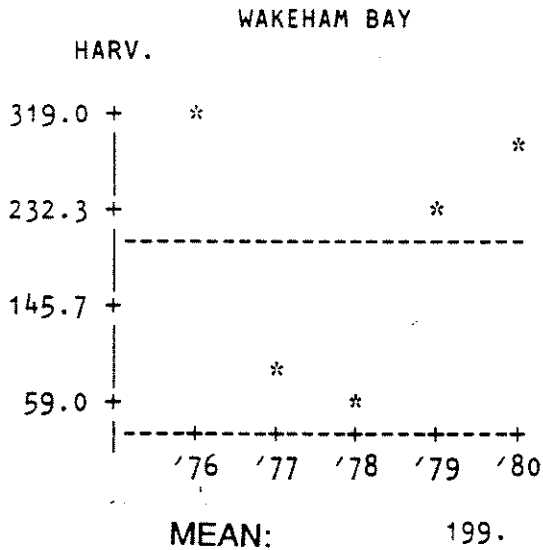
TOTAL CANADA GOOSE



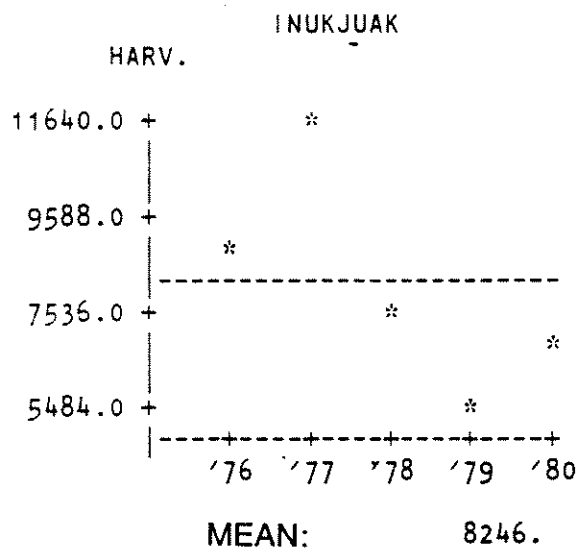
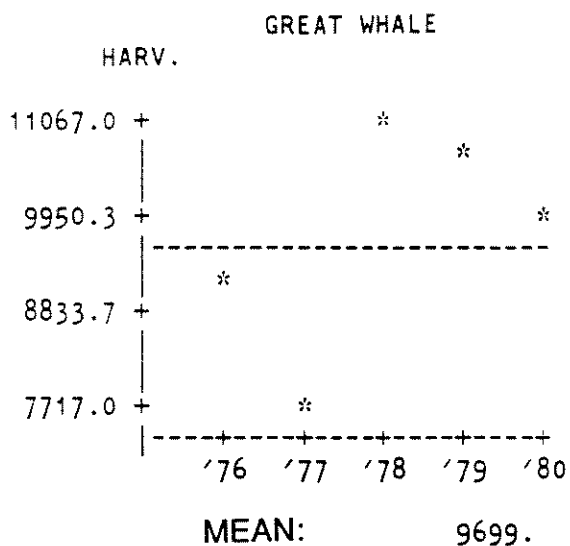
TOTAL CANADA GOOSE



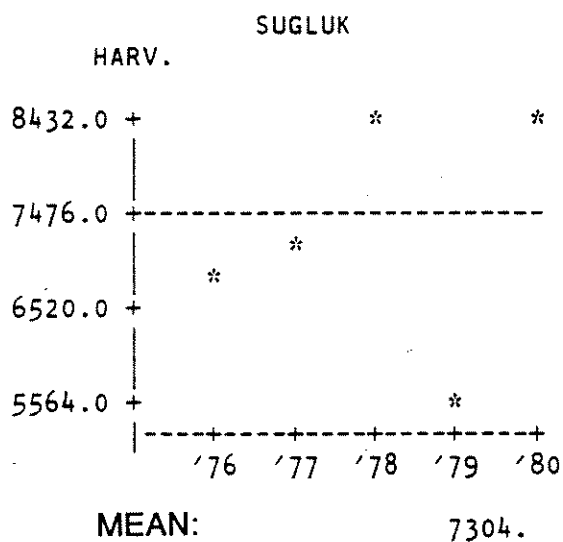
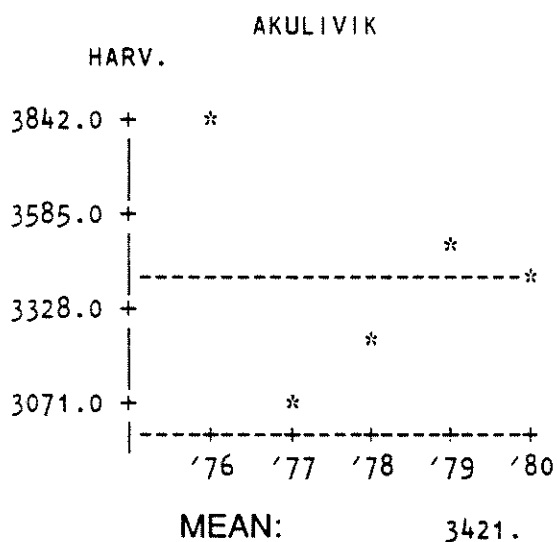
TOTAL CANADA GOOSE



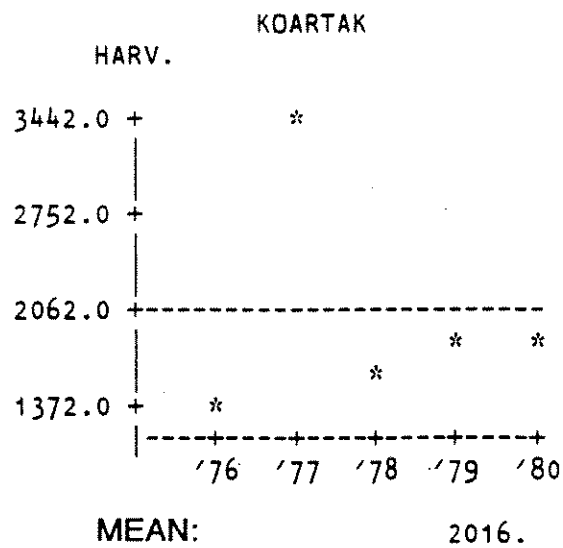
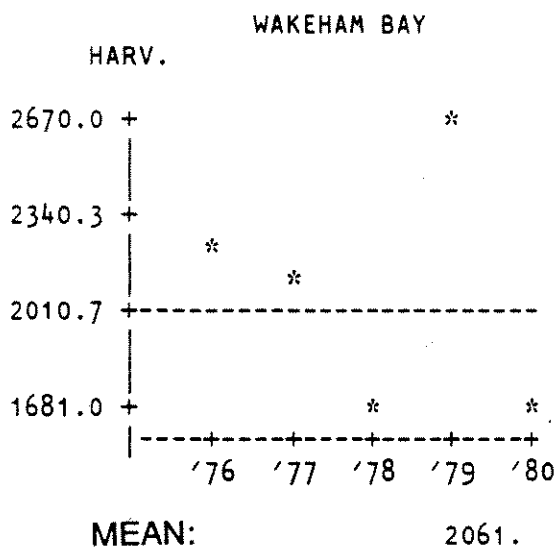
TOTAL PTARMIGAN



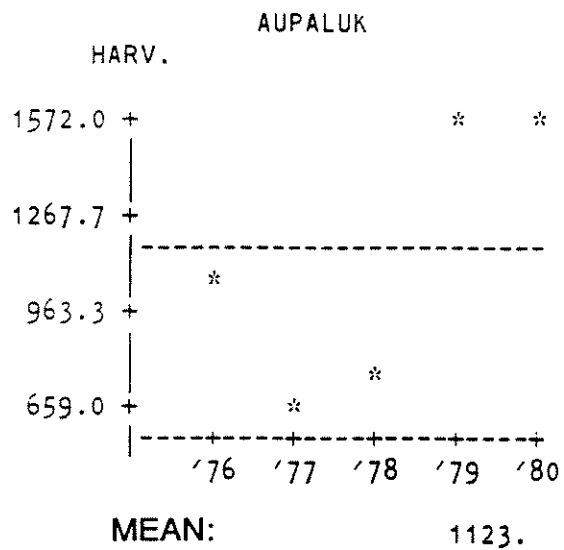
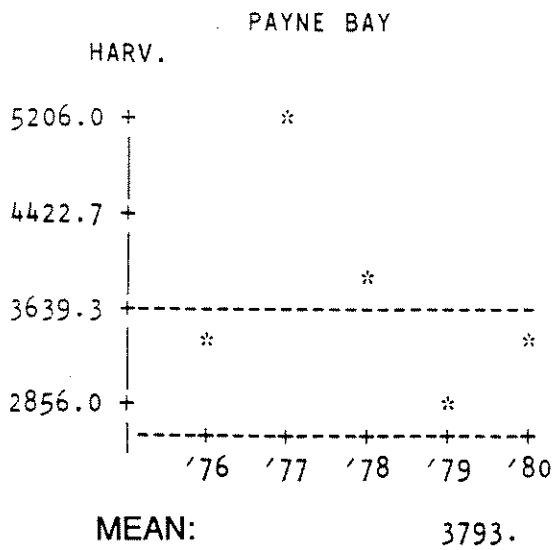
TOTAL PTARMIGAN



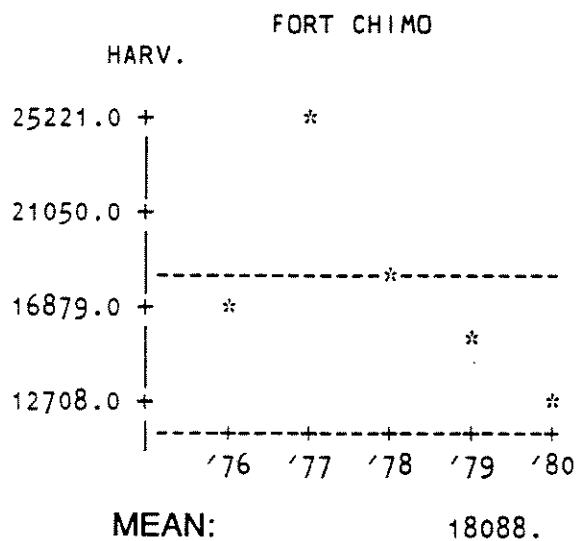
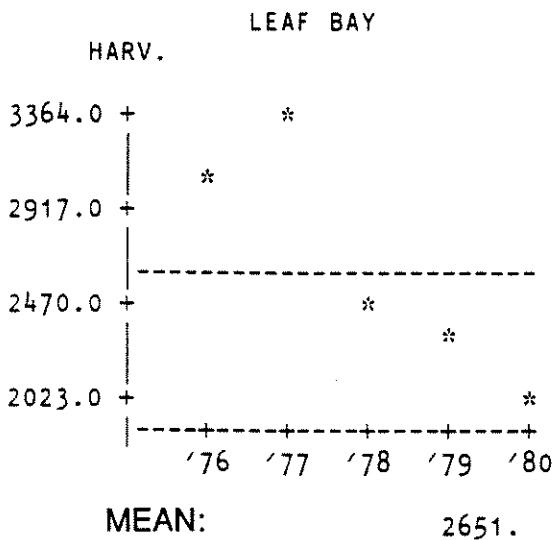
TOTAL PTARMIGAN



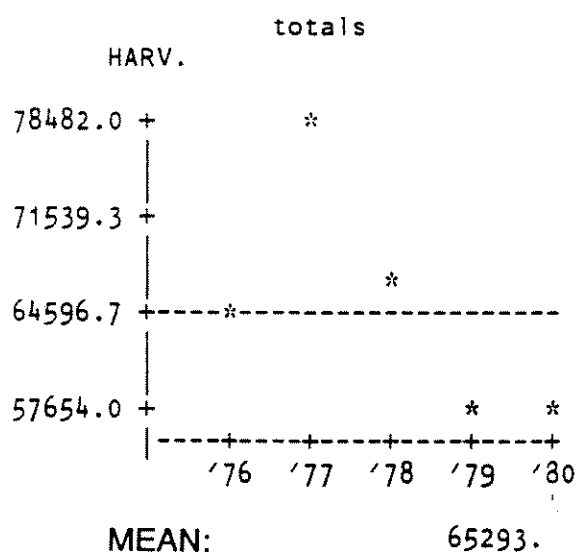
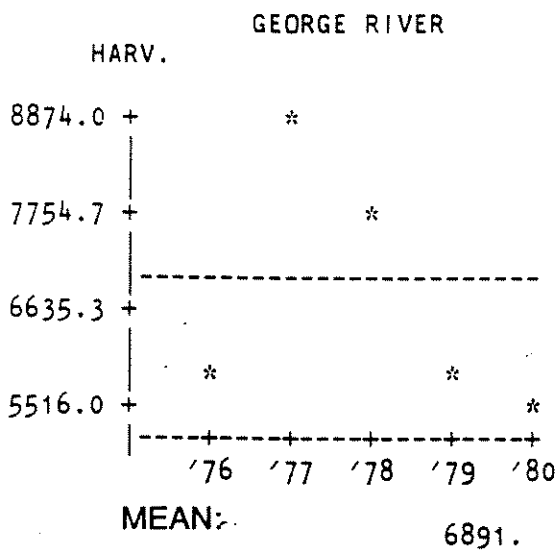
TOTAL PTARMIGAN



TOTAL PTARMIGAN



TOTAL PTARMIGAN



BIBLIOGRAPHY

Bibliography

- 1976 Research to Establish Present Levels of Harvesting by Native Peoples of Northern Québec. Part I. A Report on the Harvests by the Inuit of Northern Québec. Final Report. James Bay and Northern Québec Native Harvesting Research Committee, Montreal, 223 pp.
- 1979 Research to Establish Present Levels of Native Harvesting. Harvests by the Inuit of Northern Québec. Phase II (Yr. 1976). James Bay and Northern Québec Native Harvesting Research Committee, Montreal, 108 pp.
- 1982a Research to Establish Present Levels of Native Harvesting. Harvests by the Inuit of Northern Québec. Phase II (Yrs. 1977 and 1978). James Bay and Northern Québec Native Harvesting Research Committee, Montreal, 125 pp.
- 1982b Research to Establish Present Levels of Native Harvesting. Harvests by the Inuit of Northern Québec. Phase II (Yrs. 1979 and 1980). James Bay and Northern Québec Native Harvesting Research Committee, Montreal, 154 pp.
- 1982c The Wealth of the Land. Wildlife Harvests by the James Bay Cree, 1972-73 to 1978-79. James Bay and Northern Québec native Harvesting Research Committee, Québec City, 877 pp.

APPENDIX I

Terms of Reference

TERMS OF REFERENCE FOR RESEARCH TO ESTABLISH
PRESENT LEVELS OF NATIVE HARVESTING - PHASE II - 1976 to 1980

1. The Present Terms of Reference

The terms of reference for phase II, in conjunction with the original terms of reference, define the nature of the studies required to prepare a scientific report on the present levels of native harvesting in the territory subject to the James Bay-Agreement and the means and costs of conducting such studies for the Coordinating Committee on Hunting, Fishing and Trapping established pursuant to and in accordance with the James Bay Agreement. The terms of reference for phase II supplement the original terms of reference and specify the studies of present levels of harvesting by native peoples of northern Quebec to be conducted from 1976 to 1980.

2. Function of the Research

a) Research will establish present levels of native harvesting for all guarantees related to the Section 24 of the James Bay Agreement.

The primary aim of the research is to establish the present levels of native harvesting as required in order to fulfill the terms of sub-Section 24.6, "Priority to Native Harvesting" of the James Bay Agreement and also indirectly the terms established during the negotiations presently underway between the Federal Government and the native parties concerning off-shore islands and waters, and generally to provide information required for the successful implementation of Section 24 and of the James Bay Agreement. Considering the cost in money and personnel of research to establish levels

of native harvesting, and considering the need to maintain the good will of Informants if research is to be successful, a single research project should be designed so as to provide the results needed to fulfill these various needs.

b) Primary research required.

Existing information, including the information gathered during phase I of this study, is not adequate for the establishment of final guaranteed levels of harvesting by Native people of all of the communities of the Territory and therefore field studies designed to collect information are imperative. The extended study for four additional years for the Cree and five additional years for the Inuit established in the James Bay Agreement, and the diary/calendar system outlined herein are required because:

1) The results of phase I for the Cree indicate that harvests of many animals vary significantly from one year to the next, so that for example, in one year, ten times as many individuals of these species may be caught as in other years, e.g. the lynx. Furthermore, other species that are presumed to have biologically relatively stable populations also reflect significant differences in the numbers harvested because of changing patterns of harvesting. Continuing the study for four additional years for the Cree and five additional years for the Inuit provides a sufficient body of data from which to provide figures that can be meaningful over a long period of time, taking into account the annual variations in the harvests of various species.

ii) The existing data only localize harvests in two broad zones, that immediately around the community and elsewhere. If the guarantees of the present levels of harvesting as determined by the research are to be useful it will be necessary in some cases to provide more specific details of the geographical location of the guarantee. For example, fisheries guarantees need to be localized and attributed to major lakes, estuaries of major rivers, coastal bays and river systems. The diary/calendar system allows more specific information on the geographical location of harvests to be gathered. Geographical data will be specified through short questionnaires and a mapping of hunting areas.

iii) The diary/calendar system supplemented by other data from short questionnaires, will gather data from a majority of the total population whereas the phase I data were limited in the Cree communities, to a one-third sample. For some important species of animals e.g. big game and sea mammals the one-third sample was an inadequate basis for projecting reliable harvest totals. The diary system shall significantly improve estimates of these harvests for the Cree communities.

iv) The harvest diary/calendar technique allows additional kinds of reliability checks on the information provided by informants and therefore increases the overall credibility of the results of the study.

c) Form of research results.

The research will gather data on the number of individuals

harvested by species and by settlement, for a defined geographical area and period of time. The results will be available to all parties to the research. These new results will be reviewed along with other existing data on levels of native harvesting, particularly the data gathered during phase I of this study, in order to establish the scientifically most reliable estimates of present levels of native harvesting. These estimates will be reported to the Coordinating Committee.

d) Research shall provide final results of phase I and II combined at least three months prior to the data set for establishment of the guaranteed levels, November 11, 1980.

Results from this research shall be available to the Coordinating Committee annually, as they are prepared. However, these results should be revised, on the basis of data gathered over the full period of time of the research when final results are presented.

3. Scope of Research

a) Definition of "present" - the period under study in phase II.

For the Cree study the definition of "present" would be a seven year study period, comprised of the last three years (1972-1973, 1973-1974, and 1974-1975) and the next four years (1975-1976, 1976-1977, 1977-1978, 1978-1979), as provided in paragraph 24.6.2 a) of the James Bay Agreement. Phase I of the research studied harvests of the three last years, phase II will concern harvests of the next four years. In areas where significant physical works will take place within the next four years, the research period should continue only up to the date of such work.

For the Inuit, the definition of "present" would be a seven years study period, comprised of the last two years (1973-1974, 1974-1975) and the next five years (1975-1976, 1976-1977, 1977-1978, 1978-1979, 1979-1980).

Because the definition of "present" involves several past and several future years the research has been divided into two phases, one based on interviews that were designed, administered and analysed during 1975-1976 to determine the past component; of present harvest levels, the other based on hunter diaries/calendars of catches kept over the next few years and turned in and processed regularly during the period to determine the future component.

b) Diary/Calendar Research Program.

i) Method.

Future harvests over the next four years for the Cree communities and five years for the Inuit communities shall be studied primarily by means of a diary/calendar record kept by adult males of all animals harvested daily by themselves and their families. Such records have been kept in the past, and could be kept in prepared notebook/calendars which would be periodically (two to four times a year) turned in to a native interviewer in each community who would interview the man and translate and transcribe the record onto tabulation sheets for key punching and processing in Montreal. Summaries and projections of totals for each community or geographical unit will be made by staff in Montreal.

This diary system was partially designed during phase I of the study, so that it would be integrated in design and continuous in field operations with the interviews conducted during phase I and so that copies of the first notebook/calendars could be distributed during 1975-1976. Subsequent data collection and future diaries/calendars will be part of phase II. In the case of the Cree it is desired that the research data year run from one summer to the next (July 1, to June 30). Revisions to the research materials, and methods should be made, if necessary, in each subsequent year on the basis of previous experience on the best means to accomplish the function of the research. Where the diary/calendar technique will not provide adequate data, other research methods may be adopted, such as short questionnaires of sample populations.

It is intended that the results of the future research be more detailed geographically, and be subject to additional reliability checks than the results of phase I, so that the data on future harvests will improve the accuracy and fill the gaps in the questionnaire data on past harvests, and so that more meaningful guarantees may be established.

ii) Population under study.

The research universe should include the harvests of all individuals defined as eligible for recognition under the James Bay Agreement, including all Native peoples - Cree, Inuit, and non-status Cree - who are members of the communities covered by the Agreement and listed in Table I below. If this research proceeds

before final lists of the eligible persons are completed, the universe should be defined broadly enough to encompass all individuals who may become eligible.

The actual listed population on the basis of which estimates should be made is the resident adult males over the age of 18 years at the time of commencement of each years' study. Residents lists established in consultation with band and community councils should be updated as necessary during the study. Catches by females and male minors should be reported by adult males.

Among the Cree the target population would consist of all males over 18 years old, stratified by age, by whether they practice harvesting as a way of life, and other variables if the data are available. Community wide harvest estimates would be projected on the basis of the achieved returns and the stratified variables.

For the Inuit the target population will be comprised of all males eligible by age according to the criteria set below. For the five year forward study respondents will be comprised of resident males over the age of 18, during each year of the study.

All active hunters will be included with the household being the basic unit for data collection. Catches by females and male minors will be reported as part of the adult male hunters catch. All food killed by an individual will be recorded even though it would be

distributed within the village. Food received from sharing will not be reported.

A supplementary interview will be conducted with members of the community councils in order to check the reliability of the estimates of certain game species arrived at by means of the calendar study.

TABLE 1 LIST OF CREE AND INUIT SETTLEMENTS TO BE STUDIED.

<u>CREE SETTLEMENTS</u>	<u>POPULATION</u>
Fort George	1455
Eastmain	282
Paint Hills	600
Rupert House (including Nemiscau band members)	1044
Mistassini (including Nemiscau band members)	1673
Waswanipi (approximately seven locations)	676
Great Whale	342
	<u>6068</u>

INUIT SETTLEMENTS

Fort Chimo	582
George River	254
Port Burwell	75
Payne Bay	230
Leaf Bay	53
Koartac	95
Makeham Bay	190
Sugluk	385
Ivuyivik	126
Cape Smith	?
Inoucdjouac	501

INUIT SETTLEMENTS

POPULATION

Great Whale
Aqojuuk

565
75
3131

Povungnituk will be included in the study population if members of that community so desire.

111) Species harvests under study.

Design of the study will take account of the multipurposed nature of the research but should also keep to a minimum the range of species under study. The present list of species will be reviewed during the detailed research design phase especially in relation to the local importance of various species.

TABLE 2 LIST OF SPECIES HARVESTS TO BE STUDIED.

Species presently not on the exclusive list:

- Moose
- Caribou
- Black Bear
- Wolf
- Trouts
- Salmon
- Chars
- Pikes
- Dore
- Cod
- Geese (including eggs)
- Ducks (including elder and eggs)

Seals

- Hares
- Ptarmigans
- Grouses
- Mallards
- Beluga
- Narwhal

Other fur-bearers of interest to both native and government authorities:

- Beaver
- Polar Bear
- Mink
- Marten
- Fisher
- Otter
- Lynx
- Molverine
- Muskkrat
- Foxes
- Ermine
- Weasels

Species important as food to certain native settlements:

- Loons
- Whitefishes
- Suckers
- Barbot
- Sturgeon
- Porcupine

iv) Geographical localization of harvest data

The study will be based on native communities and the geographical unit will be the area harvested by the people of each community, but for meaningful harvest levels of some fish, small game, waterfowl, and furbearers, data will be attributed to smaller geographical areas such as traplines, estuaries, bays, groups of islands, etc., in so far as this is practical. Detailed design of the research will give careful consideration to the priority for geographical data in relation to each species and in relation to the ease of gathering and processing the data.

v) Reliability of Results.

a scientifically and professionally acceptable level of reliability will be built into the design of the study. This will involve, in part, the following measures:

- a) internal checks on response consistency will be made by questioning harvesting time intensity, differences between animals caught and pelts sold, and catches by group and by individual;
- b) comparisons of estimates by tallymen or community councils with results from diary/calendar systems;
- c) comparison of harvest results with data available from earlier studies (e.g. phase I, C.M.S. goose study, and GCCQ Fort George study) and comparison of furs sold with provincial fur sale statistics;

d) prepared explanations before the diary/calendars are distributed and during interviewing;

e) interviewing by permanent field staff, conducted in the native languages;

f) adaptation of the diary/calendar to local concepts of animals, seasonality and geographical location;

g) spot checks conducted by the research staff and possibly by members of the research committee.

h) observations of harvesting activities of natives by researchers conducting separate research projects will be used as independent checks on the study results whenever possible.

4. Research Organization - Structure Responsibilities and Personnel

a) Coordinating Committee on Hunting, Fishing and Trapping.

Overall control and review of the research activities will be the responsibility of the Coordinating Committee on Hunting, Fishing and Trapping which shall receive monthly reports from the responsible bodies for technical and administrative aspects and for financial aspects of the research. The Coordinating Committee shall inform the parties periodically of the overall progress of the research.

b) Research Committee.

All matters concerned with the research program, design, interpretation and report shall be the responsibility of a joint

Research Committee composed of experts from the various parties involved. This committee shall be composed of one representative from the Government of Quebec, one representative from the Government of Canada, one representative from the Corporations, namely the JBEC, JBDC, and Hydro Quebec, one representative from the Northern Quebec Inuit Association, and one representative from the Grand Council of the Crees (of Quebec). The members of the Research Committee shall be seconded by their respective organizations and shall perform their work at no direct cost to the research study.

The Research Committee will be the final decision making body in designing the research and analysing the results and will maintain an overview of the administration of the work. It will be responsible to the Coordinating Committee on Hunting, Fishing and Trapping, to which it shall refer any issues upon which it is unable to reach a decision.

The Research Committee should meet on a regular basis, at the beginning of phase II of the study very frequently until the permanent staff is hired and the research design is completed, and later as is necessary.

c) Legal entity for financial transactions.

The James Bay Development Corporation shall be the legal entity delegated to undertake financial transactions on behalf of the parties involved in the research. The James Bay Development Corporation will contract for employment, goods and services required. It shall provide these services with reimbursement equal to the direct accounting costs incurred by JBDC for this research.

The Government of Quebec, Government of Canada, James Bay Development Corporation, James Bay Energy Corporation, Hydro Quebec, Northern Quebec Inuit Association, and Grand Council of the Crees (of Quebec) shall pay their portion of the budgeted cost of this study directly to the James Bay Development Corporation which shall establish two special funds and deposit the proceeds into two trust accounts one for the Cree portion of the study, one for the Inuit portion. The liability of the James Bay Development Corporation will be limited to the total of the funds voted for the research to the extent that they are deposited in the account.

d) Accountant.

An accountant shall control the disbursement of funds from the trust accounts and shall keep full accounting records of the expenses incurred by the study, and shall make monthly reports to the Coordinating Committee on Hunting, Fishing and Trapping on the current state of the research expenditures and budget.

The accountant shall be provided by the Coordination Office for implementation of the James Bay Agreement under arrangements worked out with the James Bay Development Corporation. He will work at no cost to the research organization and shall be an ex officio member of the Research Committee. He shall give the research administrators guidelines concerning personnel, travelling expenses and data processing contracts, and shall be in regular contact with the research administrators for payments required.

e) Administrative Staff.

Day to day administration of research will be the responsibility

of two part-time research administrators one for the Cree part of the study and one for the Inuit part of the study. Their responsibilities will include recruiting personnel, assignment of responsibilities, coordination and supervision of all field and processing activities, planning work and travel schedules, office administration, and financial liaison with the accountant. The administrators will inform the accountant of financial activities. The administrators shall be ex officio members of the Research Committee and shall report to that committee as regards the contents and administration of the research. The administrators should be assisted by a field staff, data processing consultants, and a secretarial staff as needed.

Both research administrators will have help coordinating work in the settlements from the field staffs of the NQIA and the GCCQ, at no cost to the research organization.

The data processing staff would be hired only as data become available for processing and would be responsible, under supervision of the research administrators, for the work of the coders, solving problems of coding and ambiguities in the data, and coordinating coding with key punching, computer processing and data cleaning.

f) Interviewers.

The full interview staff will be hired on a part-time or full-time basis as needed and will be trained on the job by the research administrators. It is intended that in the Cree communities interviewers be hired to work specific settlements. In the Inuit communities the interviewers will be organized into three units, one for the Hudson's Bay Coast, one for Hudson Strait, and one for the Ungava Bay Coast.

g) Consultants.

The Research Committee needs to have access to consultants on specialized areas such as research design, computer science, and biological resources, especially in the early planning and data analysis stages. Priority will be given to qualified consultants in the government service whose assistance can be secured on secondment.

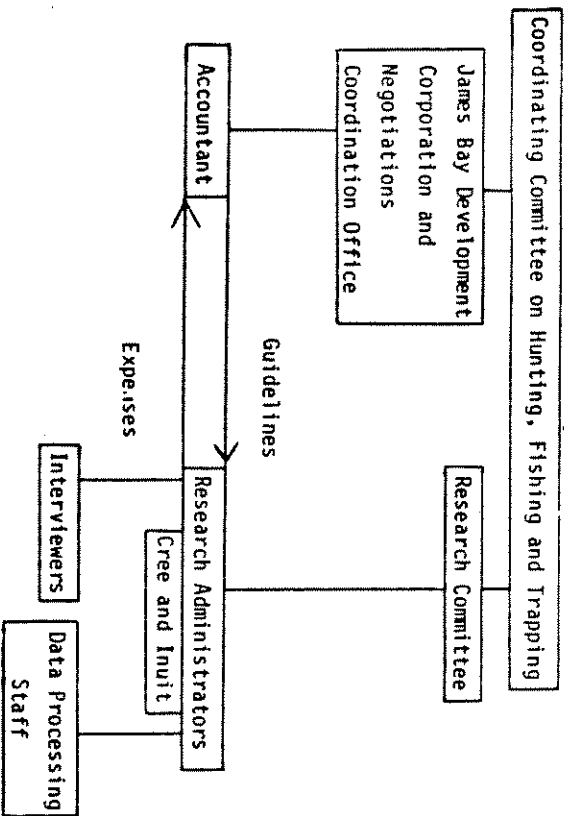
h) Facilities required.

The research and offices will be located in Montreal for easy access to all parties involved in negotiations, direct transportation to major northern settlements, and adequate support facilities.

The administrative staff for both the Cree and Inuit parts of the study will require two large offices (total approximately 550 sq. ft.). Facilities required will include office furniture, tele-communications, office supplies, etc.. In addition the research organization will require ready access to a substantial meeting room on a periodic basis.

In northern settlements, the D.G.N.Q. will provide the research organization with required facilities, whenever possible, and without cost. Employees will be insured by the Quebec Worker Compensation Commission.

i) Organigram of the Research Organization.



5. Research Program and Timetable

a) Research Program.

The cultural uniqueness and diversity of the communities under study require that there be extensive native participation in all levels of research from the earliest phases of inception to its completion. The research program is organized to assure participation of individuals from the native communities in the planning, execution and analysis stages of the research. It is anticipated that this procedure will also provide a basis for later permanent harvest monitoring systems.

b) Timetable.

There is a practical necessity of conducting field interviewing during those periods of year when interviewees are most likely to be in the communities and to be available for questionnaire administration, and especially during the spring/summer period.

This places a premium on time and requires that work commence as soon as possible. The Research Committee can start its work prior to operationalization of the funding procedures, but funds will be required within a few weeks of the final approval of the research program.

TABLE 3 MODEL ANNUAL TIMETABLE FOR FUTURE HARVEST STUDY - CREË PART 1976-1977.

- | | |
|------|---|
| June | <ul style="list-style-type: none"> - Research Committee reviews results required, scientific criteria, variables to be studied, data needs, analytical process. - Research Committee recruits Montreal staff. |
| July | <ul style="list-style-type: none"> - Research Committee designs research tools, and processing formats and procedures. - Montreal Office is opened. - Field Testing and Design of recording instruments. - Revisions to recording instruments. - Translation and Printing. - Hiring of field staff. |

- Training of field staff.

July, August - Data collection in the field.

- Data tabulation and coding in the field.

- Research Committee visits several settlements, assesses quality of diary records being kept.

- Distribution of notebook/calendars for next annual period.

- Completion of field work for 1975-1976.

September, - Data processing, from summers work.

October

- Continuation of field work on 1976-1977 diary.

- Printouts.

- Preparation of results for 1975-1976.

December - Preparation of annual interim report, and recommendations on revision of present harvest levels.

- Continuation of field work on 1976-1977 diary.

January to - Shutdown of Montreal Office unless specific
May needs develop.

- Continuation of field work on 1976-1977 diary.

6. Budget Requirements and Responsibilities

Detailed budget has been approved to cover the cost of the second phase of the research: Future research during 1976, 1977, 1978, 1979 and 1980 (\$806,971). A detailed budget appears in table 4 below.

The costs incurred by this project will be paid jointly by the Federal Government (25%), the Provincial Government (25%), the Corporations (25%) and the native parties respectively (25%).

Any funds remaining from Phase I of the study after final accounting of costs associated with that phase will be transferred to the Phase II accounts equally, and the pursuant payment by the parties to the research will be reduced in equal proportion to the amount transferred.

The research is authorized only up to the limit of these budgets. Should any additional funding be necessary, it will require a new authorization from the parties before any expenditures may exceed the total of these budgets.

TABLE 4 BUDGET - MANDATE - PHASE II

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
<u>Inuit Research-Field</u>					
Research Administrator (half-time)	8,000	8,000	8,000	8,000	8,000
Field Staff	28,500	25,500	25,500	24,500	24,500
Travel and Accomodations	8,000	8,000	7,500	7,500	7,500
	<u>44,500</u>	<u>41,500</u>	<u>41,000</u>	<u>40,000</u>	<u>40,000</u>
<u>Inuit Data Processing and Office Expenses</u>					
Secretarial Assistance	1,250	1,250	1,250	1,250	1,250
Computer Services and consultation	6,500	4,500	4,500	4,500	4,500
Printing and Photocopy	3,000	3,000	3,000	3,000	2,000
Office Space	2,000	2,000	2,000	2,000	2,000
Office Supplies	1,000	750	750	750	750
Office Equipment	1,500	-	-	-	-
Tele-communications	1,000	1,000	1,000	1,000	1,000
Staff Benefits	2,375	2,175	3,175	2,125	2,125
Accounting	2,500	2,500	2,500	2,500	2,500
	<u>21,125</u>	<u>17,175</u>	<u>17,175</u>	<u>17,175</u>	<u>16,125</u>

(CONTINUED)

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
<u>Inuit Data Processing and Office Expenses (Cont'd)</u>					
Contingencies:	2,700	2,300	2,300	2,300	2,200
TOTAL FOR INUIT STUDY (1976 Dollars):	<u>\$68,325</u>	<u>\$60,975</u>	<u>\$60,475</u>	<u>\$59,425</u>	<u>\$58,325</u>
TOTAL FOR INUIT STUDY (current dollars). ¹	<u>\$68,325</u>	<u>\$67,073</u>	<u>\$73,175</u>	<u>\$77,657</u>	<u>\$82,317</u>
<u>Cree Field Research</u>					
Research Administrator (three-quarter time)	12,000	12,000	12,000	12,000	-
Field Staff (five man-years per study year)	48,000	48,000	48,000	48,000	-
Travel and Accomodations	10,000	10,000	10,000	10,000	-
	<u>\$70,000</u>	<u>\$70,000</u>	<u>\$70,000</u>	<u>\$70,000</u>	<u>-</u>
<u>Cree Data Processing and Office Expenses</u>					
Secretarial Assistance	1,250	1,250	1,250	1,250	-
Computer Services (key punching, programming, computer use)	4,000	3,000	3,000	3,000	-
Printing and Photocopying	4,000	4,000	4,000	2,000	-

(CONTINUED)

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Cree Data Processing and Office Expenses (Cont'd)					
Consultants	2,000	2,000	2,000	2,000	-
Office Space	2,000	2,000	2,000	2,000	-
Office Supplies	1,000	750	750	750	-
Office Equipment	3,000	-	-	-	-
Tele-communications	2,000	2,000	2,000	2,000	-
Staff Benefits	3,900	3,900	3,900	3,900	-
Accounting	2,500	2,500	2,500	2,500	-
	<u>25,650</u>	<u>21,400</u>	<u>21,400</u>	<u>19,400</u>	<u>-</u>
SUB-TOTAL:					
Contingencies:	<u>3,500</u>	<u>3,200</u>	<u>3,200</u>	<u>3,000</u>	<u>-</u>
TOTAL FOR CREE STUDY (1976 dollars)	<u>\$99,150</u>	<u>\$94,600</u>	<u>\$94,600</u>	<u>\$92,400</u>	<u>-</u>
TOTAL FOR CREE STUDY (Current dollars) ¹	<u>\$99,150</u>	<u>\$104,060</u>	<u>\$114,466</u>	<u>\$120,748</u>	
ONE-QUARTER SHARE OF INUIT BUDGET (ANNUAL)	<u>\$17,081</u>	<u>\$16,768</u>	<u>\$18,294</u>	<u>\$19,414</u>	<u>\$20,579</u>

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
ONE-QUARTER SHARE OF CREE BUDGET (ANNUAL)	<u>\$24,788</u>	<u>\$26,015</u>	<u>\$28,617</u>	<u>\$30,187</u>	<u>-</u>
ONE-QUARTER SHARE OF INUIT PLUS CREE BUDGETS (ANNUAL)	<u>\$41,869</u>	<u>\$42,783</u>	<u>\$46,911</u>	<u>\$49,601</u>	<u>\$20,579</u>
TOTAL INUIT BUDGET FIVE YEARS (CURRENT DOLLARS)	<u>\$368,547</u>				
TOTAL CREE BUDGET FOUR YEARS (CURRENT DOLLARS)	<u>\$438,424</u>				
TOTAL BUDGET FIVE YEARS (CURRENT DOLLARS)	<u>\$806,971</u>				

1. Assumes inflation rate of 10 percent for the next two years and 8 percent in successive years.