

HEBERLE FISHING
Western Australia
1929-2004
By Greg Heberle

"Heberle Fishing Western Australia 1929-2004" by Greg Heberle, submitted to publisher February 2006.

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Cover photos:

Top: Salmon in net at Reef Beach. Hank Scheepers, Ron Heberle senior, Walter Collingwood, John Cleary, John Scheepers.

Bottom: "Forby" and Buff Ford at rear of house at House Beach. Ron Heberle senior, Pauline, Merylyn, Patricia, Greg, Grant, Ron junior.

Both photos taken in 1963 by Graham Bowden.

Persons in all photos listed from left to right. (Unknown persons = X).

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INTRODUCTION

This book covers professional fishing activities by the Heberle family in the SW of West Australia. Few details are presented for general fishing (other than salmon season fishing) as the family holds few records for these activities. More detail is presented for the salmon seasons, as good records are held for most years.

I have previously prepared booklets covering Heberle salmon fishing activities in 1985 and 1993.

Volume 1 of Heberle salmon fishing history was prepared in 1985. Details of salmon seasons from 1946 to 1985 are included.

Volume 2 of Heberle salmon fishing history covers salmon seasons 1962-2004, which are seasons covered by Fishermens log books. The new season summaries include some additional information such as wind direction and strength and details of other salmon schools sighted but not caught.

Volumes 1 and 2 are available from my web site on the Internet:

<http://freepages.genealogy.rootsweb.com/~gregheberle/HEBERLE-FISHING.htm>

ACKNOWLEDGEMENTS

Thanks are due to Heberle family members who provided information, photos, or other assistance: Ron senior, Ron junior, Cheryl, Cyril, Eric, Jennifer, Malcolm, Marilyn, Milanna, Pauline, Patricia, Ross, Susan. The assistance of the following is acknowledged: Graham Bowden, Norm Casey, Mark Clift, Rod Frost, George Gilchrist, Ken Gilchrist, Dr Mike Walker.

HEBERLE FAMILY FISHING SEASONS 1929-2004

Details about Heberle fishing activities, for each year 1929-2004, are presented in the annual summaries.

Fishing generally occurred at the following locations. Occasionally, other locations such as Broke Inlet, Denmark, Albany, Reef Beach (between Bremer Bay and Pallinup), Oldfield River and Stokes Inlet were fished.

1929. General fishing at Furnissdale, Peel Inlet.

1930-36. General fishing Esperance.

1936-37. General fishing Doubtful Island Bay, Hopetoun.

1938. General fishing Cape Riche, Doubtful Island Bay, Gairdner River, Hopetoun.

1939-45. General fishing Cape Riche, Bremer River, Doubtful Island Bay, Gairdner River, Pallinup River, Hopetoun.

1946-55. General fishing Cape Riche, Bremer River, Doubtful Island Bay, Gairdner River, Pallinup River, Hopetoun. Salmon fishing Doubtful Island Bay.

1956. General fishing Cape Riche, Bremer River, Doubtful Island Bay, Gairdner River, Pallinup River, Hopetoun. Salmon fishing Cape Riche, Bremer Bay.

1957-63. General fishing Cape Riche, Bremer River, Doubtful Island Bay, Gairdner River, Pallinup River, Hopetoun. Salmon fishing Doubtful Island Bay.

1964-2004. Salmon and herring fishing Doubtful Island Bay.

A history of the Country fish supply (the business name for Heberle fishing operations 1937-1960) is provided in the Katanning Shire history (Heberle, 1988).

Heberles fished for salmon on Reef Beach at Doubtful Island Bay, which is some 15km due ENE of Bremer Bay and about 150km due ENE of Albany. See **Appendix 1**. The beach is about 2.3km long and curved, with the middle facing ENE. The beach is protected from NW, W, SW, S and SE winds. The beach is exposed to NE and N winds and partly to E winds.

Heberles average salmon catch was about 73 tonnes whole weight per year, about 4% of the West Australian commercial catch (see **Appendix 3**).

The average herring catch during the salmon (and herring) season was about 8 tonnes per year, about 1% of the West Australian catch (see **Appendix 4**). Possibly at least as much herring was caught between salmon seasons up to 1963, in general fishing, but family records are not available.

Catch data for general fishing (outside salmon and herring seasons) is not held by the family, with the exception of data for Pallinup 1945-54, which is in **Appendix 17**. This data suggests that catches may have been at least 1 tonne/week or 50t/year.

Salmon fishing teams

Team members for each season, as far as is recorded or remembered are shown in the annual summaries.

Salmon seasons by family members were as follows:

Les Heberle 1946-60.

Ron senior 1946-94.

Norm 1946-47, 1972.

Cyril 1946-50.

Eric 1947-48.

Greg 1965-66, 1969-2004.

Ron junior 1967-2004.

Andrew 1998-2004.

Grant 1973.

Patricia 2004.

Kevin 1979, 1981.

Some details of the lives of the above Heberles are in the Heberle family book by Heberle (2005).

Known team members are listed for each season. The records are incomplete.

The following were involved in 10 or more seasons:

Rod Frost 1968-70, 1972-2004.

George Gilchrist 1967, 1969, 1977-94, 1996-99, 2002-03.

Cleve Johns 1951-59 (some of), 1961-62, 1964-65, 1967.

John Cleary 1959-70.

The following were involved in 5 or more seasons:

Roley Davis 1971-79.

Colin Tindale 1982-89.

Norm Casey 1977, 1981, 1994-98.

Brad Tindale 1998-2003.

Ernie Coyne (some of) 1949-59.

Jack Coyne (some of) 1949-59.

Keith Farmer (some of) 1951-58.

Others:

Family members, relations, spouses and children of team members often assisted, notably Pauline, Patricia and Milanna Heberle; Susan, Andrew and Matthew Heberle; Murray, Jamie and Sandra Frost; the Caseys.

Salmon fishing camps, cleaning sheds

1946-55 in tents at south end of Reef Beach.

1956 Cape Riche, Bremer Bay.

1957-63 in house at House Beach, with a shelter shed there.

1964-72 in shack on sand hill, half way along Reef Beach, with a shelter shed on Reef Beach initially and then at the current location.

1973-2004 at current location (200m N of above), half way along Reef Beach, with a shelter shed there (behind the beach).

Camp locations are shown in **Appendix 5**.

Main boats

1945-51. 5.5m launch.

1946-64. 3.8m clinker rowing boat.

1949-73. 4.6m clinker rowing boat LFB A91.

1971-2004. Derben fibreglass 4.6m jet boat LFB A110.

1974-2004. Brooker aluminium 4.1m rowing boat LFB A92/A110A.

1980-2004. Stacer aluminium 4.2m rowing boat then jet boat LFB A87/A110B.

Other boats

A number of small boats were used to put out and pick up anchors and small nets, including a flat-bottomed river boat in the 1960s, 3.8m bondwood boat (c1974-83) and 3.6m aluminium rowing boat LFB A110C (c1985-2004). Colin Tindale's yellow boat was used in the 1990s.

Nets

Hemp nets (8.9cm mesh) were used exclusively from 1949 until 1961 when a nylon bunt was introduced. All nets have been nylon since 1969.

Cleaning

The first cleaning machine was introduced in 1949. It had a water pump, trough and brushes. A guillotine was added in 1950. The new cleaning machine was used from 1955 until 1978. All salmon have been sold whole since 1980.

Vehicles

1935-46 Nash utility and trailer.

1946-51 Ice truck 1934 Ford 2t.

1946-54 Lease lend 1942 Ford 3t.

1948-72 "Forby" 1942 Ford 3t 4x4.

1952-66 Buff 1952 Ford 5t.

1954-75 Green 1954 Ford 5t.

1954- Red 1954? Ford 1t, used by Les Heberle.

1970-87 Landrovers 1968 yellow, 1962 Silver, Grey 6x6.

1972-78 Green 1966 Toyota Stout 1.5t.

1976-92 Red 1973 Ford 7t.

1977-83 White 1976 Toyota Dyna 2t.

1982-96 Yellow 1981 Toyota Hilux 1t 4x4.

1984- 89 White 1979 Mitsubishi Canter 3t.

1990- Grey 1976 Toyota Landcruiser 2t 4x4.

1993-2004 White 1978 International Acco 12t.
2003-2004 Black 1996 Toyota Hilux 1t 4x4.

Tractors

1973-81. One tractor (Fordson).
1982-89. Two tractors (Fordson, International).
1990-94. Three tractors (Fordson, International, Nuffield).
1995-96. Four tractors (Fordson, International, Nuffield, Massey Ferguson).
1997-2000. Four tractors (Fordson, Nuffield, Massey Ferguson, Chamberlain).
2001-04. Three tractors (Nuffield, Massey Ferguson, Chamberlain).

Route to the cannery

The first tracks into Doubtful Island Bay were presumably put in by settlers such as the Wellsteads from Bremer Bay and the Hassells from Qualup, probably by about 1870. When the Heberles first went to Doubtful Island Bay in 1938 there was access by tracks to Bremer Bay and Qualup and beyond. The best access was via Bremer and Rams Head to Borden and Albany via Chester Pass Road or to Perth via Katanning. When the Bremer Bar was open to the sea the route through Qualup was normally used. At one stage trucks were driven through the Bremer River.

When the War Service Land Settlement scheme opened up the Gairdner River area, access was available first via Devils Creek and Swamp Roads (1957) and then via Gordon Inlet and Swamp or Bremer Road from 1961 onwards. The trip to Albany was shortened when the Hassell Highway and Marra Bridge across the Pallinup River was opened in 1962. Travelling times were reduced by the progressive bitumenising of Bremer Bay Road (1971-82).

Catch details

Daily catch figures for each season, if known, are presented in Volumes 1 and 2 and **Appendix 6**. Figures for 1949 to 1961 are based on cannery receival data. Many of these catches were caught the day before. Figures for 1962 onwards are generally based on log book information. All catch data is of Heberles share only eg if the catch was shared 50:50 then double the amount shown was caught.

AUSTRALIAN SALMON

The Australian Salmon is not a true salmon, but a sea perch of order Perciformes, perch like fishes. Until recently (c1994) its scientific name was *Arripis trutta*. Australian Salmon, like many other fish (animals and plants) can be grouped into several different races or populations. Until recently, western subspecies (*Arripis trutta esper*) and eastern subspecies (*Arripis trutta marginate*) were recognised. The western subspecies had 25 to 31 rakers on the first gill arch and the eastern subspecies had 33 to 40 rakers. In recent years it has been decided that there are two species of Australian salmon (Jones, 1999). The East Australian species has retained the name of *Arripis trutta*. The West Australian species has the name *Arripis truttacea*. The West Australian species has a more rapid growth rate, larger maximum size, lower number of gill rakers and a different time and location of spawning.

Distribution of the 2 species/subspecies

The typical distribution of the two species/subspecies of Australian Salmon is shown in **Appendix 2**, from Malcolm (1961). Populations of "Australian Salmon" occur in New Zealand waters and near Lord Howe, Norfolk and Raoul Islands, as well as in WA, SA, Tasmanian, Victorian and NSW waters. Occasionally eastern species/subspecies fish are caught in WA and western

species/subspecies fish in NSW. Some eastern species salmon have been found in eastern SA waters (Jones, 1999).

Reproduction and behaviour of the Western species/subspecies

Female salmon lay planktonic size eggs about 0.9mm diameter with an oil globule of about 0.3mm diameter, which float near the surface of the sea and are fertilized by sperm that males release into the water. The fertilized egg probably takes about 36 to 40 hours to develop into a larva. The larva grows into a small free swimming fish.

Spawning of the western subspecies is believed to occur mainly from Cape Leeuwin to Busselton during the period February to May. Probably some spawning occurs throughout the adult range, from about Ceduna SA to Perth and is related to chemical and physical conditions of the environment, which vary from year to year.

Most of the salmon larvae and small fish are believed to move eastwards with the prevailing currents. Some small salmon, about 5cm long and believed to be about 6 months old appear in Tasmanian waters in October - November (Malcolm, 1967). Some go into estuaries in WA eg. Broke, Irwin, Pallinup, Bremer, Gairdner in some years. Probably small salmon develop throughout the entire range of the subspecies/species.

Mature fish in the spawning "run"

Each WA salmon season (February to April) a proportion of the mature fish move westwards and on to beaches in the WA fishery in the spawning run" or "front run".

Tagging reported by Stanley (1979) suggested that SA salmon move to WA from the age of 3 years onwards with a proportion staying in SA waters at all ages. If it is correct that western subspecies salmon do not spawn east of Ceduna SA (Malcolm, 1961) then it is likely that all surviving mature salmon (that breed) from SA, Victoria and Tasmania eventually move into WA waters.

Proportion of WA catch from eastern states

The proportion of the WA catch originating from the eastern states is uncertain. Early tagging suggested that the proportion from Tasmania was very small (Malcolm, 1961). FINS (1968) suggested that in the 1965 salmon season only 3% of the WA catch was eastern states recruits, with 45% from bight waters and 52% resident (WA) stock. However this estimate may have been based partly on incorrect assumptions.

Later tagging and catch data suggested that the proportion of eastern states recruits in the WA catch may be much higher eg 50%. There could be a large variation from year to year. If mature western species/subspecies salmon are spread more or less equally throughout their range than the proportion of the annual WA catch originating from WA waters might be about 50%, SA 35%, Western Victoria 10% and Western Tasmania about 5%. The resident WA stock might nearly all be eastern states recruits from previous years. A very small proportion might be from spawn that developed in WA estuaries or open sea west of the SA border.

Mature fish in the "back run"

After spawning, there is a "back run" (post spawning run) from west to east. This occurs anytime between the end of the front run in April to the start of the next front run. Often quite small schools may be involved.

Salmon "schools" (from FINS, 1968)

It is possible that during the salmon season, schools of salmon move along the coast and when ready to spawn they move into shallower, sometimes brackish water to spawn. At this time some schools of salmon are seen in a doughnut formation moving around in a circle. This might be spawning behaviour.

Food chain

Eastern species/subspecies salmon is reported as feeding mainly on plankton (Malcolm, 1967). Its larger number of gill rakers (better for straining) would be of advantage if this is correct.

The western species/subspecies feeds mainly on small fish such as pilchards (*Sardinops neopilchardus*), blue sprats (*Spratelloides robustus*), sandy sprats (*Hyperlophus vittalus*), herring (*Arripis georgianus*) and scaly mackerel (*Amblygaster posters*). The larvae and smallest fish presumably feed on plankton.

Australian & New Zealand fisheries

Salmon are caught commercially in WA, SA, Victoria, Tasmania, NSW and New Zealand. Typically, large quantities were not caught until canning of salmon commenced in each state. Juvenile fish are found mainly in SA, Victorian and Tasmanian waters and adults typically only in WA, eastern Victorian and NSW waters (Malcolm, 1967).

Timing of commercial catches

Most catches are usually made in the following months:

WA Front run: mid February to early April on south coast, March to late April on west coast. Back run: mainly May to August.

SA Whole year. Most fishing is between the tuna seasons.

Victoria Main season: March to May. Secondary season: November to January.

Tasmania Whole year. Main season is October to March.

NSW Main season: April to July. Secondary season: November to February.

Method of catching (commercial)

In WA its all shore based seine netting. Row or jet boats shoot a net from the shore around the fish and back on to shore. The net is then pulled in by hand and/or vehicle/tractor with the fish in the bunt (central deepest and heaviest part of the net).

In other states a proportion of the fishing has been from large carrier vessels from which a net boat is launched. For a period after about 1965, large quantities were caught by purse seining from large vessels.

RESEARCH

Cappo (1987) reviewed research findings and reported on South Australian salmon tagging (1984-1986). Tagging has shown that Western salmon is a single interbreeding population with a spawning area in southern West Australia. Apart from a very small proportion of the spawn developing in estuaries in WA, the spawn and young salmon develop in SE Australian waters.

The time and place of spawning is not precisely known. It is thought to occur from March to late April (and May) from areas east of Albany to Busselton. Spawning may be so timed to enable larvae and juveniles to catch the eastward flowing Leeuwin current. If spawning is intended to catch the Leeuwin current then some of it could occur some kilometres out to sea. The Leeuwin current flows close to the coast near Cape Naturaliste and Cape Leeuwin but some kilometres out to sea, along the eastern south coast.

During the spawning period, female roes are ripe for 4 - 6 weeks and apparently each female extrudes a few eggs at a time many times over during the period. This is probably connected with the behaviour of some schools remaining stationary for days, often swimming circularly in a doughnut shaped formation. This is probably spawning behaviour.

Juvenile salmon (0+ age group) arrive in:

- South Australia in July - September.
- Tasmania in August - September.
- Victoria in August - October.

Some juveniles develop in the Esperance area and in estuaries south of Perth. Juvenile salmon are 5-8 cm in total length when first recorded in nursery areas.

The life cycle is completed when maturing salmon migrate to spawn in W.A. Migration is of 3+ year and older fish, mainly 4+ and 5+. Migration is rapid and can occur close to the start of the spawning season, as shown by tagging. Some salmon have been caught in WA six weeks after tagging in SA. Salmon tagged about January 21 have been caught in WA in early March of the same year.

The occurrence of salmon is probably out to about the Continental shelf, which is at about 200 metres depth. Pilchard, Western salmon's main prey, occurs in the same area. Most of the salmon population is probably near to the coast rather than near the shelf.

The "cues" that send maturing juveniles migrating to WA and "clues" that these salmon follow when on migration (Harden-Jones 1984) are unknown. The timing of the migration, or at least the time of arrival on W.A. beaches is quite regular from year to year, varying only by a week or two, at least at Doubtful Island Bay over the last 40 years, as shown by catch data.

West Australian salmon research opinions up to 1993 are presented in the Western Fisheries autumn 1993 issue, as reported by Cribb (1993). Preliminary modelling of the WA fishery suggests that salmon abundance and the annual catch depends mainly on the level of annual recruitment (Lenanton et al 1991). Major peaks in the annual catch are thought to be mainly due to strong recruitment from the western Bight and Esperance areas, topping up the Eastern States migration. The strength of the Leeuwin current (3-5 years previously) is thought to be the main factor affecting annual recruitment, rather than fishing pressure. Some opinions were:

- The Leeuwin current may be the primary cause of spawning behaviour, with salmon seeking out the warm current.
- Water temperature may act as the spawning trigger.
- Spawning may occur (during the annual migration) where ever the water conditions are right, anywhere along the south and west coast range.
- In strong Leeuwin current years typically most of the salmon do not go far up the west coast. In weak Leeuwin current years more salmon go further north.

Leeuwin current, El Nino

The following information is mainly from Pearce (1991).

The Leeuwin current flows down the West Australian coast around Cape Leeuwin and into the Great Australian Bight. This current exists throughout the year but is strongest between April and October. It is a low nutrient, low salinity, warm (2 degrees warmer than local seas) current which typically flows near the edge of the continental shelf. The shelf is located at about 200m depth, in this area.

By comparison with other Southern hemisphere west coastal currents (Humbolt off South America, Benguela off West Africa) the Leeuwin flows the opposite way, that is south rather than north. These other currents are associated with upwellings rich in nutrients, which stimulate plankton blooms and support prolific food chains of plankton eating bait fish such as pilchards, which in turn provide food for larger predatory species such as salmon.

Figures in Pearce (1991) indicate that the waters off West Australia produce less than half as much plankton as off S. Africa and S. America. Consequently unlike the great pelagic (sea surface) fisheries of South America and Southern Africa, West Australia's commercial fisheries are dominated by bottom dwelling species such as rock lobster and prawns. Figures in Lenanton et al (1991) suggest that the fish catch off West Australia is only about 0.1% of that off South Africa and South America.

There is evidence that the strength of the Leeuwin current fluctuates in response to El Nino Southern Oscillation events. ENSO events are the result of complex interactions between the ocean and the atmosphere in the tropical Pacific Ocean and have been associated with climatic and environmental anomalies around the world. During ENSO years the Leeuwin current is generally weak.

Water temperature

The strength of the warm Leeuwin current is thought to influence how far north the cold water species Australian salmon will travel during the annual spawning run. There is also evidence that during strong current flow, salmon schools may move offshore to avoid patches of warmer water. The strength of the current is also thought to determine how many salmon turn up in nursery areas in the eastern states. Western salmon apparently occurs in water of mean surface temperatures in the range 10 to 18 degrees C in winter and 14 to 22 in summer.

Pilchard (Mulie) research

Pilchard (mulies) are the main diet of WA salmon. Excessive fishing pressure on pilchard within the range of the Western salmon could therefore affect salmon stocks. W Fletcher (1990-91) has reviewed pilchard research data. Pilchard is distributed along Southern Australia and part way up the west and east coasts, out to about the edge of the Continental shelf. Western salmon occurs within this same range. Pilchard occurs in water of mean annual temperatures between 12 and 20 degrees C. and mean winter surface temperatures between 9 and 21 degrees C.

Salmon stock assessment

Cappo (1987) presented some stock assessment figures for part of the SA fishery, based on aerial spotting. The assessment for 1984-86 was between 3,600 and 6,200 tonnes. Cappo considered this to be an under-estimate due to numerous small schools missed. Also there are some areas not included. Possibly a better estimate would be between 5,000 and 9,000t. The population is likely to fluctuate markedly from from year to year, if the commercial catch is any indication.

Possibly of the order of 3,000t of SA salmon migrate to WA each year. This would be so, if SA stock contributes about 1000t/year to the WA commercial catch and about 30% of the spawning stock are caught each year. This would be balanced by annual growth of non-migrating stock of ages 0+, 1+, 2+, 3+ etc and the annual recruitment of spawn 0+ from WA, but with considerable variation from year to year.

Estimates of the WA stock made in The 1960s (Nichols & Malcolm, 1965) were of the order of 4,000 to 19,000 tonnes (including SA recruits). If the annual exploitation of the spawning stock in WA is about 30% and virtually the whole WA stock is spawning stock, then the population could be between 4,200 and 12,600t, based on a commercial catch between 1,000 and 3,000t and an amateur catch of 400 to 1,200t.

WEST AUSTRALIAN SALMON FISHERY

Commercial salmon beaches

Recently occupied salmon fishing beaches are shown in **Appendix 1**, from Walker (1982). In the past, large quantities of salmon were caught near Hopetoun (at the 12 and 13 mile beaches) and small quantities in the Esperance area.

Annual catch figures

Annual catches since 1941 are shown in **Appendix 3**.

Salmon canning

The first canning of salmon in W.A. was probably in 1943 by Vincent Gardiner of Ocean Canning Co. in Perth. Dan Hunt's Albany cannery commenced operations in 1946, with a capacity of 20 tonnes/week. Also in 1946, Young opened a small cannery near Hopetoun, capacity 50t/year. In 1948 "Sea Foods" cannery (Simonsen) opened in Albany, Hunt opened a cannery in Esperance and a cannery opened in Busselton. In 1977 Southern Ocean Fish Processors built a fish handling installation on the foreshore at Albany. Hunts took over this installation in 1981. In August 1977 West Ocean Canning was granted permission to receive fish at Albany for transport to Perth for processing in their new cannery, which had replaced their Busselton factory. In 1984 Hunts Foods encountered financial difficulties, which saw them go into receivership after the 1985 salmon season.

Restrictions on salmon fishing

Fishing and fish processing in WA is controlled by the Fisheries Act. In 1964 the Fisheries Act (section 12A) was amended to allow sections of coastline to be gazetted as "Proclaimed Fishing Zones". This restricted activities in these zones during the fishing season. Under section 12B, particular fishermen could be given exclusive fishing rights within specified PFZs. A number of salmon fishing beaches were so gazetted on 19.3.1965, 11.2.1966 and 16.9.1966. In the gazette of 21.1.1966 the use of block nets was prohibited.

Prior to the 1973 salmon season, netting was prohibited in waters adjacent to Rottnest Island. This greatly reduced the annual salmon catch (mainly for bait) in the Fremantle area. In 1975, the Act (Section 32) was amended to allow for "Limited Entry Fisheries". In the salmon fishery this has meant that fishermen cannot enter the industry and existing fishermen cannot fish on other beaches, without permission from the Department of Fisheries. For details see the gazettes of 29.8.1975 and 30.4.1976. Regulations in the gazette of 28/1/1977 banned purse seining for salmon in W.A. waters. In 1978 a bag limit of 5 salmon per day was put on amateurs.

The policy on transfer of salmon concessions since 8.10.1981 was: When the present holder retires a decision is taken by the Department as to whether salmon fishing should continue. If yes, the concession may pass to a team member if that person is clearly the most appropriate and this is agreed to by the current holder. If there is no obvious person to take over the availability of the beach will be advertised and a selection made by the Department. Under this policy Coombes and Guest have taken over from their fathers.

Conditions (1985) on Limited_Entry Salmon Licences were:

- i) Salmon not to be taken from any other beaches.
- ii) No fishing when the licence holder absent from the beach.
- iii) Only to catch salmon by beach seining.
- iv) Not to use guns or explosives to redirect fish.
- v) Not to use block net.

Restrictions on herring fishing

It has been recognized that Herring trap nets affect the movement of salmon. From 1980 until 1982 the use of Herring traps was prohibited in the months December to March inclusive. During April and May they were only to be set 11 hours or less before sunset and pulled in 1 hours or less after sunrise. In the period February 15 to April 30 salmon fishermen authorised to operate on a particular beach (on the south coast) were to be the only ones who could fish for herring on that beach. In 1982 the rules were changed to prohibit the use of Herring traps from February 10 to March 24 inclusive each year. Traps could be used outside that period but only by fishermen authorised to fish on specified beaches. Also in 1982 it was decided that if the authorised team decides not to set, then another team could set. The herring trap was not to be set prior to 1600 hours but seine shots were permitted. The rules may have changed since then.

BREMER BAY AREA HUMAN HISTORY (Mainly from Bignell, 1977)

Aborigines

Aborigines are believed to have lived in the south west of WA for at least 38,000 years. There is some evidence of habitation as long ago as 150,000 years. At the time of white settlement the Goreng (Koreng) tribe occupied the Gnowangerup-Bremer Bay area. The local population was probably quite small (<120?) as the Aboriginal population of the entire south west corner in 1829 is estimated as 6,000. (Berndt, 1973). The language spoken was Noongar (Nyungar). According to the Doubtful Islands area coastal plan, Colin Grey shepherded sheep for Hassell's at Qualup in 1947 and at Doubtful Island Bay in the 1950s.

Europeans

The first recorded ship to visit the area was the "Guiden Seepaart" in 1627, captained by F Thijssen (Dutch) and carrying P Nuyts. The first recorded British ships to visit the area were "Discovery" and "Chatham" in 1791, captained by George Vancouver. He named Point Hood and the Doubtful Islands. The first Frenchman was B D'Encrecasteaux in 1792, who was in charge of two vessels "Recherche" and "Esperance". Aboard one of these ships was a Mr. Riche after whom Cape Riche was named.

Mathew Flinders was in the area in January 1802 in the ship "Investigator". He named Cape Knob, west of Dillon Bay, and proved that the Doubtful Islands were islands by sailing between them. Flinders also named West, Middle and East Mount Barren. Some say that he landed at House Beach and dug a well to obtain water in "well corner" of Reef Beach. This well was referred to as "Whalers well" by early settlers.

In July 1842 Edward Eyre (25) and Wylie passed through the area on their journey from Adelaide to Albany. Other early visitors were the botanist Drummond in 1843, Surveyor General J Roe in 1848 (he named the Fitzgerald and Gordon Inlets) and the geologist Von Somner (who examined coal deposits at Fitzgerald River) and the Gregorys in 1849.

The first white men to stay more than a few days in the area were sealers in the late 1700s or early 1800s. In 1835, two youths (including Jimmy Newell) walked from Esperance to Albany, a distance of 640 km, after a disagreement with some sealers, including a negro called Jack Anderson. Evidently one of Anderson's crew was killed in a disagreement near Doubtful Island

Bay. During the 1700s and 1800s rabbits and goats were landed on islands in the Albany to Esperance area to provide food for mariners. Sealers are believed to have been in the area up until about 1850.

French and American whalers operated in the area as early as 1803. Whaling stations were established along the south coast in places such as Doubtful Island Bay, Cheyne Beach and Cape Riche from about 1838 onwards. The whaling station at House Beach, established by John McKenzie, operated from about 1846 to 1865. Two whalers were killed whilst whaling in 1878, one was buried near Whalers well.

There is little published information about commercial fishing in the early years. George Cheynes probably sold some fish to visiting ships calling at Cape Riche from about 1843. The Wellsteads caught fish at Bremer Bay for sale in the goldfields as early as 1895. By the 1920s there would have been a significant amount of amateur fishing by visitors to the Bremer Bay area. The Heberle family has been professional fishing in the Cape Riche to Hopetoun area since 1936. Professional salmon fishing commenced at Hopetoun in 1944 and in the Bremer Bay area in 1946.

Development

In 1838 George Cheyne settled at Cape Riche and later established a port there. Sandalwood cutters operated in the area from about 1847. Captain John Hassell settled at Jerramungup in 1849. When regulation made provision for pastoral leases in 1851 the first claimants east of Albany were Cheyne and Hassell. The next settlers were the Barrett Brothers (1850) who settled on the Pallinup River at "Mongup". Relations of Mrs. Cheyne, the Moirs, eventually took over Cheyne's properties in the Cape Riche area and the Barrett's property at "Mongup". A relative of George Cheyne, WA Graham was another early settler in the area, in about 1858.

In 1860 John Wellstead settled in the Bremer Bay area, firstly at "South West Bay" and later at "Peppermint Grove". He built Quaalup homestead in 1858. In about 1890, the Hassell's took it over. Construction of the overland telegraph line between Albany and Adelaide commenced in Albany on 1st January 1875 and was completed in less than 3 years. A telegraph station initially operated by Mary Wellstead was established at Bremer Bay c1876.

John Hassell had 5 sons. In 1877 two of the sons AY and AW Hassell leased all of the properties except Kojonup from their father. AY Hassell married in 1878. His wife and family (4 sons and a daughter) sometimes stayed in a humpy at Doubtful Island Bay. By 1894 the Hassell estate had been divided between the brothers and it was no longer possible for the Jerramungup sheep to be shorn at Kendenup. AY Hassell then (1894) built a shearing shed and living quarters at House Beach so that wool could be shipped from there to Albany.

The original homestead at House Beach was built in c1893. It was shifted from Albany and transported on the "Grace Darling". It may have been replaced in c1924.

As early as 1897 rabbits were reported crossing the South Australian border into WA. To halt their progress the government commenced constructing the No 1 Rabbit Proof Fence in 1902 from Starvation Bay near Hopetoun, northwards. However by this time rabbits had already moved further westwards, so construction of a second fence (No 2) was commenced from Point Ann northwards. However this failed to stop the rabbits, which by 1914 were reported at Bremer Bay.

Ednie Hassell (one of AY Hassell's sons) was the last Hassell to operate the Jerramungup - Doubtful Island Bay property. In 1927, Ednie Hassell blew off his right hand dynamiting for salmon at House Beach. By 1946, due to family differences, both of his sons had left the property. In 1948 the government commenced negotiations to purchase the Jerramungup - Qualup - Doubtful Island property for inclusion in the War Service Land Settlement Scheme. The deal was completed after Ednie Hassell's death in 1950.

The Hassell, Qualup and Doubtful Island properties were exchanged for land near Kwinana in 1952. Jesse Lugg became owner. In 1953 Colin Cameron arrived at Jerramungup to supervise the War Service Land Settlement scheme at Jerramungup. In 1954 the WLSL decided to develop a further 202,000ha (141 farms) in the Gairdner River area. By 1959 virtually all of these farms were operational.

In 1957 the townsite of Jerramungup was gazetted. In 1962 the Marra Bridge was constructed over the Pallinup River and the bitumenised Hassell highway from Esperence to Albany was opened. Also in 1962 the townsite of Bremer Bay was gazetted. It had been called Wellstead since 1951. Bremer Bay was named in 1849 after Sir Gordon Bremer, captain of HMS Tamar.

LAND MANAGEMENT

Land tenure

Appendix 7 from Doubtful Islands area coastal plan 1994 summarises land tenure.

Purple title land

Based on a study of land title documents and Company annual reports, it appears that Empell Pty Ltd purchased Kent location 1307 of 405ha (adjoining House and Reef Beaches) from MP Lenegan Pty Ltd for \$20,000 on 6.3.1974. From 1974 until 1980 shares of the property were sold to over 200 persons for a total of over \$300,000. Similarly, a related company, West Coast Waterfront Investments Pty Ltd, purchased Kent location 1325 of 1095ha at Peppermint Beach. This property was divided into 2745 shares, some sold since 1974.

Management plans

At least 4 management plans were published for the area 1974-1994:

- Jerramungup coastal district draft management plan (1974).
- Fitzgerald national park management plan 1991-2001.
- South Coast Region (of CALM) management plan 1992-2002.
- Doubtful Islands area coastal plan 1994.

All of the above plans have recommendations or prescriptions which may affect access to the Doubtful Island Bay area. For example the Fitzgerald park plan provides for continued access by commercial fishermen through the national park, including transport of catches. This is subject to use of designated public access and the same road closures as applying to the general public.

Mining

There is some interest in mineral sands in the area. Mining leases have been issued.

Squatter's and fishermen's buildings

There are about 12 squatter's buildings, excluding those of professional fishermen, between Trigelow and Drages Beaches. Management plans usually propose implementation of the State government squatter policy, which provides for removal of all shacks after 6 year's notice. The policy has not been applied in this area to date. The only fishermen's lease in the area is Heberle's. Hassell's house at House Beach is also on a lease.

BREMER BAY NATURAL HISTORY

Some details of geology, vegetation, plant and animal species in the area, are presented in Volume 1. **Appendix 8** shows some soil and vegetation data, from Doubtful Islands coastal plan, 1994.

SALMON PRICES

Appendix 9 shows typical salmon prices at Albany since 1946. It is likely that WA prices are affected by the quantities of salmon caught and prices per can of salmon caught in the Eastern States and New Zealand. Current prices are almost the lowest on record in real terms and about one third of 1981 prices.

WHALE STRANDINGS

Major whale strandings in the Doubtful Island area since the 1950s are listed in Mell (1988) as follows:

- September 1962 33 *Physeter catadon* (Sperm whales) Reef Beach.
- May 1964 34 *Pseudorca crassidens* (False killer whales) Reef Beach.
- October 1976 17 *Physeter catadon* (Sperm whales) Trigelow.
- August 1979 13 *Orcinus orca* (Killer whales).
- September 1979 22 *Physeter catadon* (Sperm whales) near Gordon Inlet.

Other whale strandings since then include:

- July 2002 58 *Pseudorca crassidens* (False killer whales) Trigelow.
- September 2003 9 *Physeter catadon* (Sperm whales) Reef Beach.

Live strandings of whales almost exclusively occur where lines of the earth's magnetic field cross the coast or are blocked by islands and where whales typically use this magnetic field for navigation, as discussed in Klinowska (1985). Certainly repeated strandings occur in some areas and rarely elsewhere.

FACTORS DETERMINING THE ANNUAL CATCH

The factors which decide whether it will be a good or bad salmon season, in the WA fishery, or on a particular beach, could include:

- The level of spawning and transport to nursery areas in the eastern states, Esperance-Bight-WA estuaries, some 3-5 years earlier.
- The survival-mortality of pre-spawning age fish and the number taking part in the spawning run that year.
- The number of resident spawning fish and where they are located at the start of and during the season.
- The speed of travel to and through the W.A. fishery determining where the concentrations of salmon are when the season starts and proceeds.
- The efficiency of the fishermen involved eg nets, boats, ability.
- Wind conditions to push schools swimming past on to or away from the beach eg moderate to strong on-shore or off-shore winds.
- Proportion of good and bad weather conditions for sighting and catching the fish.
- Beach conditions eg rocks, gutters, reefs covered with sand, minimal weed, nothing panicking the fish (boats, seals, dolphins).
- Water conditions eg temperature, salinity, lack of suspended silt, weed, plankton etc if these are avoided by salmon.

Why do salmon come on to beaches during the season ?

Some salmon schools are seeking beaches for spawning. Possibly in the past, much spawning occurred in estuaries, so spawning salmon could instinctively seek out beaches which might have

ivers. This probably is the reason for only a small proportion of schools arriving on Doubtful Island Bay Reef Beach, as most schools do not exhibit spawning behaviour.

A few schools, often very small, are wounded fish seeking an area, usually near the reef, to rest for a while before moving on.

Most schools appear to be just moving past to spawn further along the coast and they swim the beach.

Migrating salmon schools passing by

Some years most salmon schools swim along Trigelow and if not caught there, they move onto Reef beach. Other years many schools by pass Trigelow and arrive directly at Reef Beach, usually in the northern (Well) corner.

Probably a few thousand tonnes of salmon swim past the beach each season, but we usually sight or catch about 100t, often less. This suggests that most of the schools are at least a kilometre off the coast and not sighted even with binoculars. Big schools, say 10 or more tonnes usually show on the surface (flurry). Smaller schools are virtually impossible to see on the dark blue water (weedy bottom) from ground level. They may be visible from the air, or from a high hill.

It is likely that salmon schools move past swimming at various average distances from the coast, out to about the Continental shelf, which is about 55km off the coast at Point Ann. Pilchard, the main prey of the salmon, are distributed out to about the Continental shelf. The salmon schools would probably move in closer to the coast and also away from the coast for various reasons such as chasing Pilchard (prey), seeking water of suitable temperature and salinity for spawning, to rest or recover from injuries, escape from predators and in response to strong winds or currents pushing them away or towards the coast.

Schools sighted and/or caught on Trigelow or Reef beaches may be mainly those swimming at an average distance from the coast of 0-5km. If the migrating salmon schools are more or less evenly distributed from the coast to the Continental shelf (about 200m depth) some 55km offshore in this area, then $5/55 = \text{about } 9\%$ of the States' salmon catch could be expected from this area, which is the case.

Some years many of the schools probably swim at least a few kilometres off the coast so miss Trigelow but come on to Reef Beach.

When the Gardiner River is flowing strongly into the sea, most schools swimming close to the coast may go wider to miss the dirty water and not be sighted on Trigelow. When it is rough on Trigelow many schools are either uncatchable or go wider and either swim on to or go past Reef Beach.

FISHING STORIES

Ron Heberle senior was a good story teller and told many stories to visitors to the camp and also in the off season. Family members present heard many of the stories numerous times, particularly wife Pauline. Some of the stories improved with time. Fishing stories often include exaggeration and presumably this applies to Ron senior's stories. Unfortunately few of the stories were written down before Ron and Pauline died in 2003-04, so most are lost. Some that were published or remembered are below.

George Andre breakdowns c1948

Heberles fished with and near some of the salmon fishermen from Hopetoun in 1947-48, including George Andre, who published a book in 1999. George mentions that he was taking a load of fish to Albany, when the truck broke down. The condenser in the distributor had failed, so he had to

walk for 5 hours back to the camp. They had decided to drive another truck to the broken down truck and swap condensers and were ready to leave when a Heberle truck arrived (on the way back from Albany) and the driver (probably Ron senior) said that he had fixed the broken down truck with a spare condenser.

On another occasion Andre's truck broke a differential housing about 16km from camp and Heberles (who were an hour or so behind, also taking a truck to Albany) picked him up and returned him to camp. He went in to Albany with Heberles next load of fish to find a replacement differential. This was arranged and Heberles brought the second hand differential out from Albany, when it arrived from Perth.

Andre's book contains information about his two daughters Leonie and Frances, who later attended Albany High School. Frances was in the same class as Greg Heberle.

Ron Heberle senior's 1988 coverage of the (Heberle) Country Fish Supply in the Katanning Shire history, includes a number of stories 1936-55.

17 gates to be opened and closed 1936-56

The access through the Hassell properties of Jerramungup-Qualup and Doubtful Island involved numerous rough and stony creek crossings, heavy sand and clay. The road was a bush track, the most difficult section being the last 16 km of peppermint sand through hillock country. There were 17 post and rail gates to open and close.

Ice truck roll-over 1938

When returning from the first trip to the Gairdner Inlet in 1938, the truck rolled over on a wet clay road between Jerramungup and Ongerup. The ice box, full of fish, was not bolted down and landed upside-down in the middle of the road with the top opening lids underneath. The truck was on its side in the gutter, full of water. Jacks, blocks, planks, big mallee roots and rocks were used to raise one end of the box to get the lids off and the fish out. Les used the kangaroo jack to get the truck was back on its wheels in 20 minutes. The ice box was re-loaded, fish and gear replaced, and they were underway. A 100m further on, steam began pouring out of the radiator. They removed the radiator and soldered the hole. After 5 hours the radiator was repaired and vehicle mobile.

Timing wheel stripped 1938

In about 1938 the truck's timing wheel stripped, halfway between Ravensthorpe and Stokes Inlet. Les walked to Bill Dunne's farm about 16 km away on the Oldfield River. He was lucky to find some visiting relations about to return to Ravensthorpe. A telephone call to Eric Thomas at the Katanning Trading Company and the replacement timing wheel arrived with the mailman from Newdegate. Les had stayed at Lou Hambley's pub and met the local Roads Board Secretary/Engineer who luckily needed to inspect the road in the general area of the broken down truck. The boys had removed the fan, radiator, timing case cover, and timing wheel. The new wheel was boiled in a tin of oil to expand it for the press-on fit and driven home by a piece of wood and gympie hammer. In a little over an hour the truck was running. After 4 days they were mobile and in that time had not sighted another vehicle.

Elephants 1939

On one trip (1939?) Heberles had a most unusual experience. It was after dark, between Lake King and Lake Grace, they were slowly negotiating a pot-holed section of road when the headlights picked up a huge dark shape with 2 blazing red eyes, closely followed by 2 others and 3 smaller ones. The driver took evasive action and skidded to a halt in the gutter, shaken and incredulous to see a parade of elephants kilometres from anywhere, unattended and walking down the middle of the road. Clutching each other's tails in their trunks, they disappeared into the dark. They were thankful that they hadn't met them on the narrow causeway across the salt lake where

they would have had the choice of meeting 6 elephants head on or driving off the road into the salt water and deep mud. Down the road about 65 km they met circus attendants on horseback. Had we seen their elephants? The elephants and non-caged animals usually walked between towns. A noisy truck had stampeded the horses which disappeared over the sandplain and they had left the elephants to move on while they rounded up the horses. All was well in the end, because the circus, including elephants and horses, performed the next night in Ravensthorpe.

Gas producer 1939-45

In 1938 Heberles had a second-hand (1934) 2.5 ton Ford V8 truck, with a removable ice box (the Ice truck). During the war, a gas producer was fitted to the truck. The ensuing loss of power caused many problems in negotiating steep, rough creek and river crossings, heavy sand and boggy tracks.

Jerramungup farmers 1939-

In about 1939, Job Haddleton, farmer and honorary Fisheries Inspector, introduced Heberles to farmers in the Jerramungup region. Heberles were happy to pick up mail and transport goods from merchants and railheads, including cream. In return, they often received assistance such as having the truck towed across flooded rivers and creeks and use of telephones.

Spares carried on trucks 1940s-

Heberles bought 4 new Fords from Katanning Stock & Trading Company 1942-54. These trucks provided good service but 3 were written off after crashing into trees on road verges. Two were rolled over on slippery and sandy roads. To provide for emergencies, a wide range of spares and gear was carried, including wooden blocks and two large Oregon hatch covers, kangaroo and hydraulic jacks, spades, axes, mattock, sledge-hammer, crowbar, chain, wire rope, wire, skid chains. Spares included (extra) tyres and wheels, front and rear springs, rear axle, ignition coil, condenser, fuel pump and flexible fuel lines, spark plugs, high-tension leads, light globes, fuses, insulation tape and battery cables, radiator hoses, radiator sealer, a bar of Velvet soap, fanbelts, syphon hose, soldering outfit, full kit of tools, plus an auxiliary fuel tank, water tank, waterbag, 9 litres of petrol and some engine oil. This was necessary because receiving assistance in the case of a breakdown was unlikely. Most spares were needed and eventually used (except the axle). Some gear was loaned to others in need.

Casuarina spring c1947

In about 1947, a spring broke on the lease lend Ford, whilst carting fish from Hopetoun to Perth. A Casuarina sapling was cut down and pruned to the same shape as the spring and bolted in to place. The trip to Perth was then resumed, with out further incident. A new spring was purchased from Houghtons in Perth. After that, spare springs were carried.

Dog stories 1947-75

George Andre's dog George used to help bring salmon in from the net, at Hopetoun c1947. Most of their catches were made at night, 1-3 AM, so the dog must have had good night vision. On one occasion he brought in more than 26 fish, probably dead or exhausted fish. None of our dogs were that useful but many used to swim out to the net. One used to swim out to the herring pocket and stand on it, out of the water. Buggsy was taught how to surf into shore on Grant's surf board. He had to be put on the surf board first.

Sugar c1950

In about 1950, on a trip from Katanning to fish in an estuary, possibly Pallinup, a number of bags of sugar, that had fallen off the back of a truck, were found on the road. They picked them up, went fishing and when returning to Katanning some days later, delivered the sugar to the police station in Katanning. The police were not impressed, accusing them of stealing the sugar.

Dumbleyung Lake 1955

The 1955 floods overflowed the Dumbleyung Lake into the Blackwood River for the first time in many years. An official of the Dumbleyung Roads Board, requested assistance to introduce fish into the lake. They had permission to remove fish from the Pallinup estuary, for translocation to Dumbleyung. A party consisting of Choc Sunter, a Roads Board member, Herbie Green and Arthur Wallis, all with a utilities and 450 litre tanks, and the Heberles' truck with 2 tanks and a seine net set off for the Pallinup bar. Black bream were caught, transported, and over 600 small fish were released into the Coblinine River which flows into Dumbleyung Lake. A check with a mesh net 2 years later caught several fat bream in excellent condition. However some years later, lack of rains caused the lake to dry up and the fish died.

Poaching? Late 1950s

By the late 1950s some of the estuaries and rivers fished by the Heberles had been closed to professional fishing, notably in the Gnowangerup Shire. It has been claimed that Heberles continued fishing from time to time in these areas. Inspectors were often on the prowl to detect illegal activity. It is claimed that friends would mislead the inspectors about the whereabouts of the Heberles. Conversely, enemies would seek to dob them in. It is claimed that Heberles sometimes dragged bushes behind their vehicles to obscure vehicle tracks and that they sometimes drove with lights off, or dimmed to avoid detection. To my knowledge they were never convicted of poaching fish from closed waters.

Whale at House beach c1960

Numerous whales are in the area in July to October. Usually very few whales are sighted in February to April, during the salmon season. One year, during the period 1957-63 when the camp was at House Beach, a whale stayed all day, near the House Beach point. At times, it appeared to be scraping its back on the reef. One year a whale was caught in Kennedy's herring net at House Beach.

Groper hook c1960

During the 1957-63 period, groper were hooked, around the rocks from House Beach. Pauline hooked a groper but at some stage she became hooked herself. The hook went through a finger. Ron senior managed to get the hook out without doing too much damage to the finger.

Salmon fishing Trigelow 1960-70

In the years before beaches were allocated to a particular salmon fishermen, there was competition to locate and catch schools of fish. This sometimes involved racing down the beach (usually Trigelow), often before daylight, towing a boat and net. More than once oars sticking out the side of the boat were snapped off, when racing vehicles passed. It paid to carry spare oars.

Undead shark c1963

Graham Bowden remembers the time, probably in 1963, when checking the shark line, they tied a very large, apparently dead shark to the boat to take it back to camp. Unfortunately they tied it (forwards ?) such that the water passing through its gills whilst underway (by outboard), revived it and its thrashing around almost sunk the boat, before they cut it loose.

Trailer left in the sea c1963

When the team returned from Peppermint and checked the beach, Cullinane's boat trailer was observed abandoned in the sea, with a salmon net tangled around it. His boat was pulled up the beach. There was no sign of any salmon, or his team. Evidently most of his team had been drinking the night before and had attempted to catch a school of salmon.

They had been unable to launch the boat properly and the net had tangled around the trailer. After a couple of hours rest, they retrieved the trailer, boat and net.

Lost traveler c1966

Very late one wet and windy night a distraught man walked in to the camp. He was trying to get to Cullinane's camp but had got lost on the sand tracks and ended up bogged on the run way into Peppermint beach. He had been walking on the tracks for hours and was wet and exhausted. He had sighted the (tilly lamp) light in the shack on the sandhill and made it to the camp. Numerous people became lost and/or bogged in those days, when few had 4 wheel drive vehicles. Many called in at the camp to request assistance or directions. Fewer became lost when many of the tracks were sign posted.

Outboard breakdown c1968

Patricia Heberle remembers the time, probably in about 1968, when she went out in the boat with her father to check on the shark line set out towards the Islands. The outboard broke down and unfortunately, they had forgotten to load oars in to the boat, so had to anchor and wait for assistance. They were not missed for about 4 hours, when one of the team walked around the rocks to enquire whether they were OK. Another boat was then sent out to rescue them.

Night shots 1968-87

Heberles did catch a number of salmon schools at night, notably in 1968, 1986-87. Some schools were flighty and impossible to catch during the day but quietened down and were caught at night. An amount of moonlight was required and not too many weed patches, so that the school could be located with certainty. Most schools were very quiet at daylight, towards the south end of the beach and easily caught.

First jet boat shot 1971

On the first occasion when the jet boat was used in 1971, the boat raced around the school of salmon. However, when the net was pulled in, there was hardly a salmon in it. The lead line had fallen over the cork line, at least once, so that the net had not fallen correctly and the fish were able to escape. After that, the jet boat was usually driven slower, providing the fish weren't moving too fast and usually 2 went out in the boat, one to watch that the net went off correctly. If there was any possibility that the net had not fallen correctly, either the boat was stopped and net untangled immediately or the net was checked once the net was all off the boat. Similarly, when whale bones were in the shot, it was often necessary to walk out or send a boat out, to unhook the net, before the net ripped or lifted off the bottom and fish escaped.

Sharks 1973

In 1973, during the period when Heberles and Bentleys fished for herring at Trigelow, Grant was holding up the back of the net, to stop fish washing over, in the waves. There were a number of sharks in the net, with the herring. However, there were also some sharks outside the net, chasing escaping herring, so Grant was jumping inside and outside the net to avoid the marauding sharks.

Passengers abandoned c1973

Grant was taking Pauline, Merilyn, Patricia and Milanna to the herring net set at Bentley's when the car broke down about 3 km from Trigelow. Grant ran on to help with the herring catch. The others were left with the car, expecting to be rescued shortly but were left there for 3-4 hours until the team returned after loading the herring and putting the net out to dry. A number of times over the years, passengers were left on the side of the road with broken down vehicles, to wait until other vehicles returned from delivering fish. If the broken down

vehicle could not be fixed quickly, its load was usually transferred to another vehicle. Sometimes it was towed.

Boat fell off trailer c1973

At the end of the season, some of the gear was taken over to Bentley's to be stored until the next season. Patricia was driving the Toyota Stout, towing a trailer carrying the 4.6m clinker boat. Unknown to her, the boat bounced off the trailer on the bumpy track. As it had a rope tied to it, the boat was pulled along the track for 2 or 3 km. Luckily, no damage was done.

Broken down truck c1975

Rod Frost took a load of salmon in to Albany with the Green Ford, but the vehicle broke down on the way back, at about 4AM near Mettlers Lake. Rod was able to make contact with a farmer who contacted Doug Moir at Cape Riche on the bush fire radio, who was able to pass a message to the camp on the fish cannery scheduled radio call. Rod was picked up by Greg, many hours later, who was taking a load of herring in to Albany on the Toyota Stout. That night Greg and Rod went to a Junior Farmer's function on the Kalgan River, with Merilyn, before returning to the camp.

Mullet c1977

Norm Casey remembers the last shot one year (c1977) when only him and Ron senior were present and a school was caught but it turned out to be sea mullet. Most went through the meshes but 0.5t was landed and taken to the Jerramungup Hotel, where they all sold in about 2 hours.

Cyclone Alby 1978

Norm also remembers Cyclone Alby (4 April 1978) just after Heberles had packed up and left the beach. Jack Drage used his tractor to tow his boat half way up the hill from Drages Beach. The windscreen and canopy were blown away, never to be seen again. The cyclone completely washed away Drages Beach (exposing rocks) and about half of the foundations of his shack.

Ritz fruit cakes 1980s

As Norm Casey remembers, every salmon season, Ron senior brought down a Ritz brand fruit cake or two, for celebrating the first 100 tonnes caught that season. Needless to say, we were rarely lucky enough to reach 100t but we usually had the cake anyway. Heberles caught 100 tonnes 14 times (1954, 1967, 1968, 1979, 1983, 1984, 1985, 1986, 1987, 1989, 1994, 1995, 1996, 1998) and reached 200 tonnes in 1985 and 1994.

Weed patch near camp 1980s

There is a patch of growing weed, near the edge of the blue water opposite the camp, which looks like fish. Its alleged that Ron senior ran the net around it at daylight a number of times. Needless to say, no salmon were ever caught with this shot. Occasionally some skippy were caught for breakfast.

Crosswords 1980s

Ron Heberle junior and Norm Casey used to do the cryptic crosswords in the West Australian newspaper, whilst spotting for salmon. Salmon were often caught at irregular intervals, every few days and newspapers were delivered accordingly when the truck returned. Cheating by looking up the solution in the next day's paper, was not allowed.

Bruised ribs 1980s

One day in 1980s a school was sighted and there was a rush to jump on the Landrover to pick up the boat and catch the salmon. Unfortunately the vehicle took off when Norm was

only half on the back. He had to jump off to avoid being hit on the head and broke some ribs. The fish were caught and the ribs were patched up, some time later, at Jerramungup.

Copper wire 1980s

George Gilchrist used to salvage the copper from copper wire. He would sometimes bring a load of copper wire down to the coast at the start of the salmon season. Usually he would burn off the plastic insulation from the copper wire, on the dry salt lake behind the camp at Reef Beach, or on Reef Beach. On one occasion in the 1980s, he burnt the plastic at night, watched by various young family members, who were thrilled by the flames of various psychedelic colours due to burning the different coloured insulation.

Circling jet boat 1980s

On one occasion, in the 1980s, Ron senior took the jet boat out to catch a school of salmon. About half way during the shot, the boat started going round in circles. The steering had broken.

National park visit 1990s

Ron Heberle senior grew up in times when there were few restrictions on access to beaches and rivers for fishing. It is claimed that very late in his life he revisited one of his old fishing spots on the Gairdner River, now in national park (or proposed as such), with some of the family (all females). He proceeded to bulldoze a track in to the river, using his vehicle and then set a net and caught some fish, allegedly in closed waters. He then lit a fire to cook them, in the prohibited burning period.

Broken wheel studs on Landcruiser c1992

Greg took a load of salmon in to Albany one night but one of the front wheels got loose and 2-3 wheel studs sheared off. Since about 1990 the road truck carried a UHF radio which could be used to call the camp or Bremer Bay (on 1 channel, when near to Bremer Bay) or Albany cannery (on another channel, when near to Albany). Greg was able to call Albany, which passed a message back to the camp. Ron and Rod quickly removed the front axle from Rod's Landcruiser and took it on the Red Ford truck to where Greg was broken down. The salmon were transferred to the truck, which went to Albany. The Landcruiser was repaired and returned to camp.

Big school 1994

Norm Casey remembers the first 50 tonne school caught on Reef Beach on 22 March 1994. The school arrived in the Well corner at daylight and moved up and down the beach behind the reef, all day. Finally, just before dark, they moved past the end of the reef and were caught near the camp. All night and the next day was spent loading salmon.

Landcruiser tail gate fell down c1995

Greg took a load of salmon to Bremer Bay in the Toyota Landcruiser. The tail gate fell down on the bumpy sand track and as a result about 100 fish fell off, in 1s and 2s along the track. The tail gate was modified after this trip.

ANNUAL SUMMARIES 1929-2004

Summary of salmon seasons since 1946

Appendix 10 summarises the main details of salmon seasons since 1946, including team members, boats, tractors, trucks and catches.

Catches related to day of the year

Appendix 6 provides catch details for each day of every season. This data is summarised in **Appendix 11**. The main salmon season on Reef Beach generally runs from about February 26 until April 9, during which time an average of at least 0.5 tonnes/day is caught. The best part of

the season is from March 12 until March 27, when the average catch is typically at least 2 tonnes per day.

Catches related to time of day

Appendix 12 summarises the number of salmon schools recorded as caught for each hour of the day. The best catching hours are 10-11 and 11-12 AM, when about 31% of schools are caught. Only about 10% of schools are caught after 4 PM.

Catches related to wind direction and strength

Appendix 13 summarises prevailing winds. **Appendix 16** summarises wind and catch data.

The wind classes used are as follows:

- Light 0-10 knots (0-18.5 km/hour)
- Moderate 11-19 knots (18.5-37 km/hour)
- Strong 20+ knots (37+ km/hour)

The best winds for catching salmon on this beach are:
Light NW, Moderate NE, Moderate N, Moderate E.

The worst winds for catching salmon:
Strong SE, Strong E, Strong NE.

These results can be explained as follows. Moderate on-shore winds (N, NE, E) tend to push schools on to the beach. However strong easterly winds (SE, E, NE) are usually associated with difficult fishing conditions and poor visibility due to the water being stirred up and weed being washed in.

Catches related to phases of the moon

Appendix 14 relates salmon catches to moon phases. First quarter to full moon is best. Possibly more schools move on to the beach over night when the moon is brighter.

Catches related to water temperature

Appendix 15 relates salmon catches to recorded water temperatures. Best was 21-21.9 degrees C. The water near this beach is probably warmer than beaches further south.

Annual summaries 1929-2004

Data for fishing seasons 1929-1947 is largely based on 2 pages of notes by Ron Heberle senior (c2000) and a paper by Ron Heberle senior (1988).

YEAR: 1929

Fished at Furnissdale, Peel estuary. Fishing team: Ron senior. Boat: wooden boat borrowed from Grandfather Furniss. Net: cotton. Trucks: nil. Leslie Heberle was a qualified mechanical engineer. He set up a business at Hay Street West, Perth in 1924. He had sold a motor garage and general engineering business at Victoria Park and used the proceeds to install modern engineering equipment, including an automatic lathe, milling, grinding, cylinder boring and valve grinding machine and an oxy welding plant. This business prospered for a number of years but the Great Depression caused financial difficulties and was eventually sold up by his creditors. In 1929, the family was in dire financial straits as were most others existing on Government sustenance. Ron (15 years old) secured a position as a junior clerk in the public service. However, the Government decided to retrench all juniors when they turned 16, so his input of \$3.50 per week ceased. Grandfather Furniss had purchased a 120ha property on the banks of the Serpentine River where it enters the Peel Estuary and had built a holiday house and a boat jetty. Family relations had use of this and frequently visited during holidays and weekends. The locality is now named Furnissdale. The townsite is located at Latitude 32 34 S Longitude 115 46 E, about 5 km south east of Mandurah. It was gazetted in 1970, and is named after William John Furniss who

purchased land in the area in 1929-30. Furniss's land was subdivided in the 1940's, and the area has been locally known as Furnissdale since that time. Ron had become friendly with a fisherman who worked from Grandfather Furniss's land and often went out with him in the boat, helping with the fishing. He offered Ron a job, which was accepted. After 12 months Ron had learned fishing practices, net making, mending and slinging and started fishing in his own right. Grandfather loaned him \$40 to buy fishing gear and allowed use of his boat. The family came down most weekends, taking fish back to Perth where brothers Eric and Norm sold them to friends, relations and others. Fish caught other than on weekends were sent to the Perth Fish Markets, railed from Pinjarra. Ron had an arrangement with a fisherman to transport both fishermen's fish. Towards the end of 1929 an advertisement appeared in the "West Australian" newspaper for fishermen wanted to go to Esperance, with or without gear. Les and Ron applied and were successful. This involved fishing at Esperance and sale of the catch to a freezing company, for sale in the Goldfields and surplus for Perth. The company paid train fares and freight on fishing gear and was to supply boats and fishing gear.

YEAR: 1930

Fished at Esperance. Fishing team: Les Heberle, Ron senior. Boat: wooden boat provided by fish company. Net: cotton. Trucks: nil. When Les and Ron arrived in Esperance in 1930, the fish company freezing plant was not fully operational but would take a limited quantity of fish. They had purchased some new gear to make more suitable nets, which when in use, resulted in over production of small fish the company couldn't accept. However they would accept the better quality fish, King George whiting, pike, flathead and flounder. The gear had to be modified to target these species. The method was to use set nets laid from the shore, behind or in front of weed banks, where the fish congregated. Results of this method of fishing were initially good, but after a few weeks, sharks, seals and rays attacked the fish in the nets, ripping the nets to pieces. Deep heavy set nets were impractical so they made up light shallow draft nets 1.3m deep, lightly corked with enough lead to sink to the bottom. These nets were set inside the weed banks in the evening and lifted 2 hours later and reset outside the weed banks 2 hours before daylight. This proved to be highly successful with a minimum loss of fish from predators and much less damage to the gear.

YEAR: 1931

Fished at Esperance. Fishing team: Les Heberle, Ron senior. Boat: wooden boat provided by fish company. Net: cotton. Trucks: nil. The freezing company went out of business in late 1931 and although Heberles had a good market for fish during the holiday season, Christmas to Easter, when families flocked down to Esperance, the market at other times was negligible.

YEAR: 1932

Fished at Esperance. Fishing team: Les Heberle, Ron senior. Boat: wooden boat. Net: cotton. Trucks: nil. Les and Ron worked in Kalgoorlie for at least parts of c1932-34.

YEAR: 1933

Fished at Esperance. Fishing team: Les Heberle, Ron senior. Boat: wooden boat. Net: cotton. Trucks: nil.

YEAR: 1934

Fished at Esperance. Fishing team: Les Heberle, Ron senior. Boat: wooden boat. Net: cotton. Trucks: nil.

YEAR: 1935

Fished at Esperance. Fishing team: Les Heberle, Ron senior. Boat: wooden boat. Nets: cotton. Trucks: Bought a utility (Nash 6) and trailer in 1935 and tried supplying fish to the mallee districts, so far as Salmon Gums, north of Esperance but the market proved to be too small. Tried a weekly run to Norseman, Widgiemooltha, Salmon Gums and Kalgoorlie.

YEAR: 1936

Fished at Esperance and then Doubtful Island Bay. Fishing team: Les Heberle, Ron senior, Eric Heberle. Boat: wooden boat. Nets: cotton. Truck: Nash 6 utility & trailer.

YEAR: 1937

Fished at Doubtful Island Bay, Hopetoun. Fishing team: Les Heberle, Ron senior. Boat: wooden boat. Nets: cotton. Trucks: Nash 6 utility & trailer, 1934 Ford 2t ice truck. Very poor roads and the long haul proved impracticable and they moved to Hopetoun in 1937, from where they ran a weekly fish supply to Wagin and all places in between, including Katanning. Surplus fish was railed to Perth on ice and fresh ice supplies picked up in bags packed with straw, railed from Perth.

YEAR: 1938

Fished at Cape Riche, Doubtful Island Bay, Gairdner River, Hopetoun. Fishing team: Les Heberle, Ron senior, Eric Heberle, Norm Heberle. Boat: wooden boat. Nets: cotton. Truck: 1934 Ford 2t ice truck.

Les Heberle and his sons Ron and Eric established a regular fresh fish supply to Katanning in 1938 after having made some sales in 1937. Les, Ron and Eric, then based at Hopetoun, had established an itinerant fish supply as far as Wagin. Fish were delivered door to door by basket and sold direct from the truck and any surplus was railed on to Perth. Ice for each trip came by rail from Perth. Fuel, stores and other supplies were purchased locally. Mrs Heberle had lived in Perth for virtually all of the period 1930-38, with daughter Phyllis and the younger boys, in the earlier years. The family moved to Katanning in 1938, except for the 2 daughters.

YEAR: 1939

Fished at Cape Riche, Doubtful Island Bay, Gairdner River, Bremer River, Pallinup River, Hopetoun. Fishing team: Les Heberle, Ron senior, Eric Heberle, Norm Heberle, Cyril Heberle. Boat: wooden boat. Nets: cotton. Truck: 1934 Ford 2t ice truck.

Catch in estuaries included sea mullet, black bream, yellow eyed mullet, salmon trout. In 1939 Mrs Heberle and Cyril moved from Perth to Katanning, where the family was reunited. It was impracticable to fish at Doubtful Island in the winter because the tracks through the clay country were impassable, so the fishing team moved to Cape Riche, where there was an all weather road. From fishing in all these new areas, where there was an abundance of small fish, for which there was a limited market, they found the most successful method of catching the high quality fish with a lucrative market was the use of the short drop sink nets originally used in Esperance. They continued to use this method until 1973 when for health reasons Ron was forced to retire from full time fishing. The country people welcomed the regular fish supply and local government made regular selling places available in the various towns. In Katanning they sold from the northern end of the railway parking area opposite the Flour Mill.

YEAR: 1940

Fished at Cape Riche, Doubtful Island Bay, Gairdner River, Bremer River, Pallinup River, Hopetoun. Fishing team: Les Heberle, Ron senior, Cyril Heberle. Boat: wooden boat. Nets: cotton. Truck: 1934 Ford 2t ice truck.

YEAR: 1941

Fished at Cape Riche, Doubtful Island Bay, Gairdner River, Bremer River, Pallinup River, Hopetoun. Fishing team: Les Heberle, Cyril Heberle. Boat: wooden boat. Nets: cotton. Truck: 1934 Ford 2t ice truck.

YEAR: 1942

Fished at Cape Riche, Doubtful Island Bay, Gairdner River, Bremer River, Pallinup River, Hopetoun. Fishing team: Les Heberle, Cyril Heberle. Boat: wooden boat. Nets: cotton. Truck: 1934 Ford 2t ice truck.

YEAR: 1943

Fished at Cape Riche, Doubtful Island Bay, Gairdner River, Bremer River, Pallinup River, Hopetoun. Fishing team: Les Heberle, Cyril Heberle. Boat: wooden boat. Nets: cotton. Truck: 1934 Ford 2t ice truck.

YEAR: 1944

Fished at Cape Riche, Doubtful Island Bay, Gairdner River, Bremer River, Pallinup River, Hopetoun. Fishing team: Les Heberle, Norm Heberle, Cyril Heberle. Boat: wooden boat. Nets: cotton. Some camouflage nets. Truck: 1934 Ford 2t ice truck.

In 1944 the Fisheries Department and the Westella Canning Company provided assistance to establish salmon production for an Army food contract and Norm Heberle was manpowered out of the Army to join Les and Cyril, Surplus camouflage nets (hand-made) were made available and fishing commenced at Cape Riche. The net pieces were loosely knotted together and allowed the meshes to run when the salmon hit, sinking the corkline and causing losses of fish. Initially the salmon were carted whole to Perth but later they were filleted by hand at the beach. These were the first salmon canned in Western Australia.

YEAR: 1945

Fished at Cape Riche, Doubtful Island Bay, Gairdner River, Bremer River, Pallinup River, Hopetoun. Fishing team: Les Heberle, Norm Heberle, Cyril Heberle. Boats: 5.5m launch, 3.8m clinker. Nets: cotton. Some camouflage nets. Truck: 1934 Ford 2t ice truck. Catch data for Pallinup 1945-54 is in **Appendix 17**. In 1945 the Pallinup catch was 7.7t Black bream, 0.3t Mullet, over 48 fishing days.

YEAR: 1946

General fishing at Cape Riche, Doubtful Island Bay, Gairdner River, Bremer River, Pallinup River, Hopetoun. Fishing team: Les Heberle, Ron senior, Eric Heberle, Norm Heberle, Cyril Heberle. Boats: 5.5m launch, 3.8m clinker. Nets: cotton, some camouflage nets. Trucks: 1934 Ford 2t ice truck, 1942 Ford 3t lease lend. In 1946 the Pallinup catch was 2.6t Black bream, over 20 fishing days.

Ron Heberle returned from overseas and was demobilized in early 1946. The fishing team moved to Doubtful Island Bay with the emphasis on shark meshing and lining, groper hooking, beach seining for small fish, and salmon in season. The fishing, although often difficult, was easy compared with transportation. The access through the Hassell properties of Jerramungup-Qualup and Doubtful Island involved numerous rough and stony creek crossings, heavy sand and clay pan sections. All a bush track, the most difficult section was the last 16 km of heavy peppermint sand through hillock country. There were 17 post and rail gates to open and close. Acquired a 1942 Ford "lease lend" truck from a shipload of trucks diverted to Fremantle after Singapore fell. Most of the catch was sold in Perth, a 540 km trip each way over rough bush tracks and dirt and rippled gravel roads. The trip took about 8 hours.

Salmon fishing team: Les Heberle, Ron senior, Norm Heberle, Cyril Heberle, Colin Gray (part time). Boats: 5.5m Launch, 3.8m Clinker. Net: 200m Cotton. Trucks: 1934 Ford 2t ice truck, 1942 Ford 3t lease lend. Camped in tents at south end of Reef Beach. There was no commercial fishing at Bremer Bay. Probably caught about 25 tonnes whole salmon, which was filleted and carted to Perth for sale to fish shops etc. Fished on Reef Beach, House Beach and Trigelow. Salmon fishing was a side line. Mainly caught other fish and shark for sale as fresh fish. Did not have a

proper salmon net. Had no beach vehicles. The launch was used to tow the 3.8m salmon boat. Hassell's grazing property was still operating in the Doubtful-Qualup-Jerramungup area. Other salmon fishermen: 2 fishing teams near Hopetoun.

YEAR: 1947

General fishing at Cape Riche, Doubtful Island Bay, Gairdner River, Bremer River, Pallinup River, Oldfield River, Hopetoun. Fishing team: Les Heberle, Ron senior, Eric Heberle, Norm Heberle, Cyril Heberle. Boats: 5.5m launch, 3.8m clinker. Nets: cotton, some camouflage nets. Trucks: 1934 Ford 2t ice truck, 1942 Ford 3t lease lend. Catch: Shark (from meshing & lining), groper, small fish (from beach seining), salmon (during season). Caught 1017 sharks during 1947.

The defunct Great Southern Butter Factory building in Creek Street, Katanning, was purchased in 1947. An ice making plant was installed. A freezing plant was added later. This enabled surplus fish to be stored before sale. Previously surplus fish was sold in Perth, sometimes for minimum profit. Ice was sold in Katanning, 7 days a week. In 1960 the ice factory was sold and the Les Heberles retired to Perth. In 1947 the Pallinup catch was 5.9t Black bream, 8.8t Mullet, 0.2t Salmon trout, over 50 fishing days.

Salmon fishing team: Les Heberle, Ron senior, Eric Heberle, Norm Heberle, Cyril Heberle. Boats: 5.5m Launch, 3.8m Clinker. Nets: 2X 230m Cotton. Trucks: 1934 Ford 2t ice truck, 1942 Ford 3t lease lend, 1942 Ford 3t 4x4. Camped in tents at south end of Reef Beach. Probably caught about 65t whole, which was sold whole to Gardiner's cannery in Perth. Small amounts were sold as fresh fish. Obtained first salmon nets and beach vehicle, 1942 Ford 3tonne 4x4 ("forby"). Other fishermen: no commercial fishing at Bremer; 2 salmon teams near Hopetoun.

YEAR: 1948

Salmon fishing team: Les Heberle, Ron senior, Eric Heberle, Cyril Heberle, Ernie Coyne, Jack Coyne. Boats: 5.5m launch, 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp. Camped in tents at south end of Reef Beach. Trucks: 1934 Ford 2t ice truck, 1942 Ford 3t lease lend, 1942 Ford 3t 4x4. Cleaning machine used. Probably caught about 60t whole (our share), which was sold to Gardiner's cannery in Perth. Other fishermen: fished with Wanns team, which included 4 Wanns (Alex, Vic, Laurie, Ray), Allen Daniels (who married Roma Wann), Val & ? Edwards, Clarrie & Bill Dawes, George Andre; Opposed Hunts team; 2 teams near Hopetoun; Chipperfield at Bremer; Cheyne Beach fishermen at Bremer in winter.

Made track from Doubtful into Peppermint during this season. Fished Reef Beach, Trigelow and Peppermint. Salmon were carted to Perth via Qualup or Bremer, Jerramungup, Ongerup and Katanning. The government commenced negotiations with Ednie Hassell to purchase his Jerramungup-Qualup-Doubtful property. General fishing between salmon seasons, typically between Gairdner River and Cape Riche. In 1948 the Pallinup catch was 2.5t Black bream, 10.9t Mullet, 0.9t Salmon trout, 3t Yellow eye mullet, 0.3t other, over 56 fishing days.

YEAR: 1949

Salmon fishing team: Les Heberle, Ron senior, Cyril Heberle, Ernie Coyne, Jack Coyne. Boats: 5.5m launch, 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh). Camped in tents at south end of Reef Beach. Trucks: 1934 Ford 2t ice truck, 1942 Ford 3t lease lend, 1942 Ford 3t 4x4. Catch: 23.6t. Fished on Reef Beach, House Beach, Trigelow and Peppermint. Other fishermen: Cheyne Beach fishermen at Bremer in winter; 2 teams near Hopetoun; Cullinane & Cagnana at Peppermint.

The above catch figures are from Hunts receival records, as supplied by Dr Mike Walker. Probably also sent some salmon to Gardiner's cannery in Perth. Some loads carted around Bremer Beach and transported to Albany via Rams Head, Chillinup and Chester Pass Road. First cleaning machine introduced during 1949. It incorporated a water pump, trough and brushes.

Obtained the big (4.6m) clinker boat and first hemp net in 1949. General fishing between salmon seasons, typically between Gairdner River and Cape Riche. In 1949 the Pallinup catch was 0.8t Black bream, 9.6t Mullet, 3t Yellow eye mullet, 0.3t other, over 49 fishing days.

YEAR: 1950

Salmon fishing team: Les Heberle, Ron senior, Cyril Heberle, Ernie Coyne, ? Harris. Boats: 5.5m launch, 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh). Trucks: 1934 Ford 2t ice truck, 1942 Ford 3t lease lend, 1942 Ford 3t 4x4. Camped in tents at south end of Reef Beach. Catch: 20.4t, caught 11 March-29 March. Other fishermen: fished with Chipperfield & Andre; Shenfield, Cook at Bremer; 2 teams near Hopetoun.

Used a conversion factor of Headed & Guttled weight x 1.42 to convert to whole weight. The above catch figures are from Hunts receival records. Probably also sent some fish to Gardiner's cannery in Perth. The cleaning machine was improved by the addition of a guillotine. Chipperfield's team included Andre, Edwards and Wignells. This was Cyril Heberle's last salmon season. General fishing between salmon seasons, typically between Gairdner River and Cape Riche. In 1950 the Pallinup catch was 3.3t Black bream, 2.2t Mullet, 0.8t Yellow eye mullet, 0.2t other, over 18 fishing days.

YEAR: 1951

Salmon fishing team: Les Heberle, Ron Heberle Sr, some of following: Ernie Coyne, Jack Coyne, Cleve Johns, Keith Farmer, Claude Rodd. Boats: 5.5m launch, 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh). Trucks: 1934 Ford 2t ice truck, 1942 Ford 3t lease lend, 1942 Ford 3t 4x4. Camped in tents at south end of Reef Beach. Catch: 66.4t, caught 11 March-1 April. Other fishermen: fished with Chipperfield & Andre; Cullinane at Bremer; 2 teams near Hopetoun.

Carted fish around Bremer Beach until got bogged. Wellstead townsite gazetted at Bremer Bay. During the period 1946-1951 fished for sharks more than salmon. From 1952 onwards caught all available salmon, except for small schools. General fishing between salmon seasons, typically between Gairdner River and Cape Riche. In 1951 the Pallinup catch was 3.2t Black bream, 5t Mullet, 0.1t Salmon trout, 2.1t Yellow eye mullet, 0.3t other, over 34 fishing days.

YEAR: 1952

Salmon fishing team: Les Heberle, Ron senior, some of the following: Ernie Coyne, Jack Coyne, Cleve Johns, Keith Farmer, Claude Rodd. Boats: 4.6m clinker, 3.8m clinker. Trucks: 1952 Ford 5t buff, 1942 Ford 3t lease lend, 1942 Ford 3t 4x4. Nets: 2X 270m hemp (8.9cm mesh). Camped in tents at south end of Reef Beach. Catch: 47.9t, caught 5 March-6 April. Other fishermen: Cullinane at Bremer.

Bought a new truck, the 1952 Ford 5 tonne "buff truck". Hassell's Doubtful Island and Qualup properties were sold by the government to private buyers. The remaining live stock were left to their own devices. General fishing between salmon seasons, typically between Gairdner River and Cape Riche. Did not fish Pallinup in 1952.

YEAR: 1953

Salmon fishing team: Les Heberle, Ron senior, some of the following: Ernie Coyne, Jack Coyne, Cleve Johns, Keith Farmer, Claude Rodd. Boats: 4.6m clinker, 3.8m clinker. Trucks: 1952 Ford 5t buff, 1942 Ford 3t lease lend, 1942 Ford 3t 4x4. Nets: 2X 270m hemp (8.9cm mesh). Camped in tents at south end of Reef Beach. Catch: 42.9t, caught 3 March-29 March. Other fishermen: Cullinane's team (which included Jack Morris, Frank Bentley and Brian Jackman) were based at Bremer but caught some fish at Trigelow.

Floods in February caused problems in transporting fish to the cannery. General fishing between salmon seasons, typically between Gairdner River and Cape Riche. Did not fish Pallinup in 1953.

A severe storm at Middleton Beach, Albany, removed Norfolk Island Pines from the foreshore. Damage probably occurred in the Doubtful island area also.

YEAR: 1954

Salmon fishing team: Les Heberle, Ron senior, some of the following: Ernie Coyne, Jack Coyne, Cleve Johns, Keith Farmer, Claude Rodd. Boats: 4.6m clinker, 3.8m clinker. Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t lease lend, 1942 Ford 3t 4x4. Nets: 2X 270m hemp (8.9cm mesh). Camped in tents at south end of Reef Beach. Catch: 112.8t, caught 15 February-3 April. Other fishermen: fished with Wignells; Morris at Bremer (with Bentley); Cullinane at Trigelow.

This was the best season to date. The above catch figures relate to Heberle's share of fish sent to Hunts only. The total catch including Wignell's share was 169.2t whole. A further 40t whole (approximately) was sent to Gardiner's cannery in Perth, of which Heberle's share was 26.7t. Morris' team, which included Bentley, caught some fish on Trigelow. Obtained a new truck, the Ford 5 tonne "green" to replace the "lease lend", which was crashed near Katanning. General fishing between salmon seasons, typically between Gairdner River and Cape Riche. Catch data for Pallinup 1945-54 is in **Appendix 17**. In 1954 the Pallinup catch was 0.5t Black bream, 9.8t Mullet, 0.3t Salmon trout, 0.3t other, over 56 fishing days.

YEAR: 1955

Salmon fishing team: Les Heberle, Ron senior, some of the following: Ernie Coyne, Jack Coyne, Cleve Johns, Keith Farmer, Claude Rodd. Boats: 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh). Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in tents at south end of Reef Beach. Catch: 46.5t, caught 19 January-18 April. Other fishermen: Morris at Bremer, Cullinane at Trigelow.

Introduced a new cleaning machine. February 14-15 rains (225mm at Ongerup) caused floods. The crossing of the Gairdner River at Qualup was washed away. General fishing between salmon seasons, typically between Gairdner River and Cape Riche.

YEAR: 1956

Salmon fishing team: Les Heberle, Ron senior, some of the following: Ernie Coyne, Jack Coyne, Cleve Johns, Keith Farmer, Claude Rodd. Boats: 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh). Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Catch: 28.6t, caught 10 March-13 April. Other fishermen: Morris at Bremer, Cullinane moved on to Reef Beach.

Floods made access to Doubtful Island Bay very difficult so started the salmon season at Cape Riche. Later in the season shifted to Bremer Bay. Had a very poor season. General fishing between salmon seasons, typically between Gairdner River and Cape Riche.

YEAR: 1957

Salmon fishing team: Les Heberle, Ron senior, some of the following: Ernie Coyne, Jack Coyne, Cleve Johns, Keith Farmer, Claude Rodd. Boats: 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh). Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in house at House Beach. Catch: 67.0t, caught 3 March-10 April. Other fishermen: fished with Cullinane, Morris at Bremer.

Utilised the vacant house at House Beach as headquarters during the salmon season. Set up a shelter shed for cleaning fish at House Beach. As a result of the War Service Land Settlement Scheme a number of new roads were constructed. Made a new track to link up with Devils Creek Road, to travel to Albany via Swamp Road, Rams Head and Chester Pass Road. Used Devils

Creek Road until 1961. General fishing between salmon seasons, typically between Gairdner River and Cape Riche.

YEAR: 1958

Salmon fishing team: Les Heberle, Ron Heberle Sr, some of the following: Ernie Coyne, Jack Coyne, Cleve Johns, Keith Farmer, Claude Rodd. Boats: 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh). Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in house at House Beach. Catch: 66.9t, caught 4 March-17 April. Other fishermen: fished with Cullinane; Morris at Bremer.

The Ron Heberle family shifted from Katanning to Albany (31 Admiral Street, Lockyer) prior to the salmon season. Fished with Newton Sharpe for herring after the salmon season. Caught about 46 tonnes. General fishing between salmon seasons, typically between Gairdner River and Cape Riche.

YEAR: 1959

Salmon fishing team: Les Heberle, Ron senior, John Cleary, Ernie Coyne, Cleve Johns, Claude Stronach (part season), Merv Gilchrist (part season). Boats: 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh), 300m herring net. Trucks: 1954 Ford 5tgreen, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in house at House Beach. Catch: 73.6t, caught 20 February-4 April. Other fishermen: fished with Cullinane & Jackman, Morris at Bremer (with Bentley).

The Ron Heberle family moved to their new house at 62 (later renumbered as 78) Campbell Road in Albany, after the salmon season. Fished with Newton Sharpe for herring. Caught about 60 tonnes. Jack Drage, Norm Butler, Eric Thomas and others built shack at Drages Beach. General fishing between salmon seasons, typically between Gairdner River and Cape Riche.

YEAR: 1960

Salmon fishing team: Les Heberle, Ron senior, Jack Coyne, Harry Back, Bernie Inman, Graham Bowden (part season), Laurie Balcombe (part season). Boats: 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh), 300m herring net. Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in house at House Beach. Catch: 59.2t, caught 20 February-19 April. Caught 14.7t of herring during the salmon season. Other fishermen: fished with Cullinane; Bentley at Trigelow; Morris at Bremer.

Bentley commenced salmon fishing in his own right, based in the corner at Trigelow. In 1960 the ice factory was sold and the Les Heberles retired to Perth. General fishing between salmon seasons, typically between Gairdner River and Cape Riche.

YEAR: 1961

Salmon fishing team: Ron senior, John Cleary, Jack Coyne, Cleve Johns, Arthur Voss (part season). Boats: 4.6m clinker, 3.8m clinker. Nets: 2X 270m hemp (8.9cm mesh) with nylon bunt in one net, 300m herring net. Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in house at House Beach. Salmon catch: 23.3 t, caught 23 February-4 April. Herring catch: 4.6t. Other fishermen: fished with Cullinane; Bentley at Trigelow; Morris at Bremer.

Poorest salmon season since 1949/50. Road from Boxwood Hills to Wellstead (Bremer Bay) upgraded. New roads put in from Swamp Road (Bertolas) to Gairdner River estuary (Gordon Inlet Road) and from there to Bremer (Gairdner River Road). First nylon net introduced with bunt only in one net. General fishing between salmon seasons, typically between Gairdner River and Cape Riche.

YEAR: 1962

Salmon fishing team: Ron senior, John Cleary, Cleve Johns, Peter Johns, Arthur Voss, G Stack. Boats: 4.6m clinker, 3.8m clinker. Nets: 270m hemp, 270m hemp/nylon, 300m herring net. Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in house at House Beach. Catch: 80.7t, caught 16 schools, 19 February-7 April, average school 5.0t. Other fishermen: fished with Cullinane; Bentley at Trigelow; Morris at Bremer.

Used a conversion factor of headed & gutted x 1.42 to convert to whole weight. Date caught based on log book records is available for 1962 season onwards. Time caught is from log book or Greg Heberle's records. Records for 1949-1961 are cannery receipt date from M Walker. Sold salmon in Perth. Used a two way radio for talking to Hunts cannery for the first time during 1962. This was the last year with Cullinane's team, which included Peter Bertola. New crossing Pallinup River constructed at Marra Bridge and Hassell Highway bitumenised from Esperance to Albany completed during 1962 in time for the Empire Games. Bremer Bay townsite gazetted (previously Wellstead). General fishing between salmon seasons, typically between Gairdner River and Cape Riche.

YEAR: 1963

Salmon fishing team: Ron senior, John Cleary, Graham Bowden, John Scheepers, Les Eades, Hank Scheepers (part season), Walter Collingwood (part season). Boats: 4.6m clinker, 3.8m clinker. Nets: 270m hemp, 270m hemp/nylon, 300m Herring net. Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in house at House Beach. Catch: 18.3t, caught 10 schools, 10 March-14 April, average school 1.8t. Fished on Reef Beach, House Beach, Peppermint and Trigelow. Other fishermen: opposed Cullinane; Bentley at Trigelow; Morris at Bremer.

Worst season to date. Opposed Cullinane who caught about 2t. Ron Heberle snr gave up full time professional fishing after this season. He typically worked for carriers, fish and vegetable processors, between salmon seasons. In September 1962, 33 Sperm whales (*Physeter catadon*) were stranded on Reef Beach. The Bremer bar was open to the sea from July 1962 to July 1963.

YEAR: 1964

Fishing team: Ron senior, John Cleary, Cleve Johns, Peter Johns, B Hansen, Arthur Voss (part season). Boats: 4.6m clinker, 3.8m clinker. Nets: 270m hemp, 270m hemp/nylon, 300m Herring net. Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in house at House Beach and also in new shack on Reef Beach. Salmon catch: 43.9t, 2 March- 3 April, caught 14 schools, average school 3.1t. Other fishermen: opposed Cullinane & Augustons; Bentley at Trigelow; Morris at Bremer.

Moved camp from House Beach to a new shack on the sandhill half way along Reef Beach. Continued to clean fish in the shelter shed at House Beach. The Fisheries Act was amended to allow beaches to be gazetted as "Proclaimed Fishing Zones". Particular professional fishermen could be given exclusive rights for specified times within these zones. This put Trigelow out of bounds for all fishermen except Bentley. Peppermint and House Beach were not zoned so were available. Hunts cannery closed for 7 days during the season. The Bremer bar was closed from July 1963 to June 1966.

YEAR: 1965

Fishing team: Ron senior, John Cleary, Cleve Johns, George Gaebler. The following were present for part of the season: Greg Heberle, Harry Findlay, John Collingwood, Ted Bugg, Arthur Voss, Bill Birch. Boat: 4.6m clinker. Nets: 2X hemp/nylon, 300m herring net. Trucks: 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in shack on the sandhill half way along Reef Beach. Used new shelter shed on beach below shack. Catch: 80.2t, 26 schools caught 16

February-8 April, average school 3.1t. Other fishermen: opposed Cullinane; Bentley at Trigelow; Morris at Bremer.

Used small dozer to dig a runway down to the beach at the new campsite on Reef Beach. Set up a shelter shed on the beach for cleaning salmon in. Hunts cannery closed for 4 days during the salmon season. In May 1964, 34 False killer whales (*Pseudorca crassidens*) were stranded on Reef Beach.

YEAR: 1966

Fishing team: Ron senior, John Cleary, Cleve Johns, George Gaebler, Jim Crabtree, Ken Gilchrist. The following were present for part of the season: Greg Heberle, Peter Bertola. Nets: 2X hemp/nylon, 300m herring net. Boat: 4.6m clinker. Trucks: 1956 Ford 5t green, 1954 Ford 5t green, 1952 Ford 5t buff, 1942 Ford 3t 4x4. Camped in shack on the sandhill half way along Reef Beach. Shelter shed on beach below shack. Salmon catch: 95.35t, 31 schools caught 2 March-15 April, average school 3.1t. Other fishermen: opposed Cullinane & Thompson; Bentley at Trigelow; Morris at Bremer; Collett at Point Charles.

As many of Heberles and Bentleys team had left by late March, both teams worked together for the last part of the season. Crashed 1954 Ford green truck near Nanarup and replaced it with an ex-army 1956 Ford 5 tonne green. The chassis bent on the buff truck, which took it out of commission at the end of the season. Hunts cannery closed for 6 days during the salmon season and there were restricted receivals on 5 other days. The Fisheries Department banned the use of block nets.

YEAR: 1967

Fishing team: Ron senior, John Cleary, George Gaebler, Cleve Johns, John Hoddinott. The following were present for part of the season: Ron junior, Ken Gilchrist, Keith Gilchrist, George Gilchrist, Merv Gilchrist, Fred Clifton, Jim Williams. Boat: 4.6m clinker. Nets: 2X hemp/nylon, 300m herring net. Trucks: 1956 Ford 5t green, 1942 Ford 3t 4x4. Camped in shack on the sandhill half way along Reef Beach. Shelter shed on beach below shack. Catch: 170.8t, caught 21 February-8 April. Caught 40 schools, average school 4.3t. Best salmon season to date. Greg Heberle was in University in Canberra in 1967-1968. The Bremer bar was open to the sea from July 1966 to December 1967. Other fishermen: opposed Cullinane; Bentley at Trigelow; Morris at Bremer; Collett at Point Charles.

YEAR: 1968

Fishing team: Ron senior, John Cleary, George Gaebler, Rod Frost, Noel Tompkins. The following were present for part of the season: Ron junior, Ken Gilchrist, George Gilchrist, Harry Finlay, Barry McAuliff. Boat: 4.6m clinker. Nets: 2X hemp/nylon, 300m herring net. Trucks: 1956 Ford 5 green, 1942 Ford 3t 4x4. Camped in shack on the sandhill half way along Reef Beach. Used new shelter shed. Catch: 120.3t, caught 22 February-18 April. Caught 32 schools, average school 3.8t. Other fishermen: Bentley at Trigelow; Morris at Bremer; Collett at Point Charles.

Les and Ron Heberle partnership dissolved 24.1.1968. Shelter shed shifted from on the beach below the shack to its current location behind the beach. A track was bulldozed into this new location. The shack was not shifted until 1972. During the season tagged salmon from east of Esperance were caught in Doubtful Island Bay. The Bremer bar was open to the sea from Feb 1968 until December 1968.

YEAR: 1969

Fishing team: Ron senior, John Cleary, Don Cleary. Rod Frost. The following were present for part of the season: Ron junior, Greg Heberle, Don Cleary junior, Ken Gilchrist, George Gilchrist. Boat: 4.6m clinker. Nets: 2X hemp/nylon, 300m herring net. Trucks: 1956 Ford 5t green, 1942 Ford 3t 4x4. Camped in shack on the sandhill half way along Reef Beach. Used new shelter shed. Catch:

41.4t, caught 31 schools, 26 February-6 April. Average school 1.3t. Other fishermen: Bentley at Trigelow; Morris at Bremer; Collett at Point Charles.

Drought. Harlands, Campbells and Muirs aggisted sheep in the Doubtful Island Bay area. The Bremer bar was open from March 1969 to the sea until December 1969.

YEAR: 1970

Fishing team: Ron senior, John Cleary, George Gaebler, Don Cleary. Rod Frost, Graham Bowden. The following were present for part of the season: Ron junior, Greg Heberle, Don Cleary junior. Boat: 4.6m clinker. Nets: 2X hemp/nylon, 300m herring net. Trucks: 1956 Ford 5t green, 1942 Ford 3t 4x4, 1968 Landrover yellow. Camped in shack on the sandhill half way along Reef Beach. Used new shelter shed behind the beach. Catch: 61.7t, caught 32 schools, 19 February-12 April. Average school 1.9t. Other fishermen: Bentley at Trigelow, Morris at Bremer, Collett at Point Charles.

Used the yellow Landrover for the first time. Harlands and others still aggisting sheep in the Doubtful Island Bay area. Bremer bar closed from January 1970 until October 1971.

YEAR: 1971

Fishing team: Ron senior, Roley Davis, Bernie Phillips, Bernie Creighton. The following were present for part of the season: Ron junior, Greg Heberle. Boats: 4.6m jetboat, 4.6m clinker. Nets: 2X 270m nylon, 300m herring net. Trucks: 1956 Ford 5t green, 1942 Ford 3t 4x4, 1968 Landrover yellow, R Davis Nissan. Catch: 29.0t, caught 23 schools, 20 February-12 April. Average school 1.3t. Caught 6.4t of herring during the salmon season. Other fishermen: Bentley at Trigelow, Morris at Bremer, Collett at Point Charles.

John Cleary, George Gaebler and Rod Frost joined Collett's team at Point Charles. First section (2.3km) of Bremer Bay Road was bitumensed. Introduced a jet boat during this season. Only used once or twice in the first season. Commenced using a 240 volt alternator in the camp for lighting. It replaced tilley lamps.

YEAR: 1972

Fishing team: Ron senior, Norm Heberle, Roley Davis, Bernie Phillips, Rod Frost, Max Howells. The following were present for part of the season: Ron junior, Greg Heberle. Boats: 4.6m jetboat, 4.6m clinker. Nets: 2X 270m nylon, 300m herring net. Trucks: 1956 Ford 5t green, 1942 Ford 3t 4x4, 1968 Landrover yellow, R Davis Nissan. Catch: 82.5t, caught 26 schools 26 February-8 April. Average school 3.2t. Other fishermen: Bentley at Trigelow, Morris at Bremer.

Fished for herring with Bentley at Trigelow (first season). Our share was 43.9t. The shack was shifted from the sandhill to adjoining the sheltershed at the current location. Introduced black and white television to the camp. Bremer bar closed from February 1972 to October 1977 allowing vehicle access across the bar.

YEAR: 1973

Fishing team: Ron senior, Roley Davis, Bernie Creighton, Rod Frost, The following were present for part of the season: Ron junior, Greg Heberle. Boats: 4.6m jetboat, 4.6m clinker. Nets: 2X 270m nylon, 300m herring net. Trucks: 1956 Ford 5t green, 1942 Ford 3t 4x4, 1968 Landrover yellow, R Davis Nissan, 1976 Toyota Stout 1.5t. Catch: 30.0t, caught 22 schools 8 March-12 April, average school 1.4t. Other fishermen: Bentley at Trigelow, Morris at Bremer.

Fished for herring with Bentley at Trigelow. Our share was 56.5t. Fordson tractor and front launching boat trailer used with the jet boat for the first time. The forby (1942 Ford 3t 4x4) was used for the last time. It was left parked at Bentley's for some years before burning in a bush fire. Hunts cannery started accepting whole salmon. Two loads of whole salmon were sent in. The shack was improved by the addition of a workshop and bathroom with an instant gas hot water

system. This was the last season in which ice was used when carting fish, until re-introduced in 2000s. Fitzgerald national park of 243,000 ha was declared an A class reserve vested in the National Parks Board on 19.1.1973.

YEAR: 1974

Fishing team: Ron senior, Rod Frost, Roley Davis, Les Wignell. The following were present for part of the season: Ron junior, Greg Heberle. Boats: 4.6m jetboat, 4.6m clinker, 4.1m Brooker, 3.8m bondwood. Nets: 2X 270m nylon, 300m herring net. Trucks: 1956 Ford 5t green, 1968 Landrover yellow, R Davis Nissan, 1976 Toyota Stout 1.5t. Fordson Tractor. Catch: 21.7t, caught 11 schools 4 March-8 April, average school 2.0t. Other fishermen: Bentley at Trigelow, Morris at Bremer.

Fished for herring with Bentley at Trigelow. Our share was 50.3 tonnes. Replaced the 4.6m Clinker (LFB A91) with a new Brooker aluminium rowboat (LFB A92). A further 3.4km of Bremer Bay Road was bitumenised (now 5.7km) from Bremer Bay end. About 40% of the catch taken in whole. In March 1974 Empell Pty Ltd commenced selling shares in Kent location 1307 of 405ha (1000ac) adjoining Reef & House beaches. This property was purchased for \$20,000 on 6.3.1974 from M.P. Lenegan Pty Ltd. From 1974 to about 1980 shares were sold to over 200 persons for a total of over \$300,000. The company was represented by accountant W.N. Dunstan. This company was related to West Coast Waterfront Investments Pty Ltd, which purchased Kent location 1325 of 1095ha at Peppermint. That property was divided into 2745 shares, which have been sold since 1974 and could still be bought for \$1,250 in 1992.

YEAR: 1975

Fishing team: Ron senior, Rod Frost, Roley Davis, Robert Hall. The following were present for part of the season: Ron junior, Greg Heberle. Boats: 4.6m jetboat, 4.6m clinker, 4.1m Brooker, 3.8m bondwood. Nets: 2X 270m nylon, 300m herring net. Trucks: 1956 Ford 5t green, 1968 Landrover yellow, R Davis Nissan, 1976 Toyota Stout 1.5t. Fordson Tractor, 1.5t wooden trailer. Catch: 61.0t, caught 26 schools, 2 March-7 April, average school 2.3t. Other fishermen: Bentley at Trigelow, Morris at Bremer.

Fished for herring with Bentley at Trigelow. Our share was 21.9 tonnes. After this season the Fisheries Act was amended to allow for "limited entry fisheries". This meant that House Beach and Peppermint were closed to salmon fishing from 1976 onwards. About 90% of the catch was taken in whole.

YEAR: 1976

Fishing team: Ron senior, Rod Frost, Roley Davis, Les Wignell. The following were present for part of the season: Ron junior, Greg Heberle. Boats: 4.6m jetboat, 4.6m clinker, 4.1m Brooker, 3.8m bondwood. Nets: 270m nylon, 250m nylon, 300m herring net. Trucks: 1973 Ford 7t red, 1956 Ford 5t green, 1968 Landrover yellow, R Davis Nissan, 1976 Toyota Stout 1.5t. Fordson Tractor, 1.5t Wooden trailer. Salmon catch: 29.7t, caught 19 schools, 2 March- 2 April, average school 1.6t. Herring catch: 8.7t. Other fishermen: Bentley at Trigelow, Morris at Bremer.

Fished for herring with Bentley at Trigelow. Our share was 8.7t. The 1956 green Ford truck was replaced by a 1973 red Ford 7 ton diesel during the season. Camp facilities were improved by the addition of a gas storage hot water system and a gas oven/stove. During the season 5 tagged salmon from Israelite Bay and South Australia were caught in Doubtful Island Bay. Introduced marine band 2-way radios for communication from beach to camp. Only one small salmon school cleaned, the rest sent in whole.

YEAR: 1977

Fishing team: Ron senior, Rod Frost, Roley Davis. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Norm Casey. Boats: 4.6m jetboat, 4.1m

Brooker, 3.8m bondwood. Nets: 270m nylon, 270m nylon, 250m nylon, 300m herring net. Trucks: 1973 Ford 7t red, 1976 Toyota Dyna 2t, 1968 Landrover yellow, R. Davis Nissan, 1976 Toyota Stout 1.5t. Fordson Tractor, 1.5t Wooden trailer. Salmon catch: 73.8t, caught 27 schools, 27 February-8 April. Average school 2.7t. On 7 March sold another 0.2t privately. Herring catch 20.0t. Other fishermen: Bentley at Trigelow, Morris at Bremer.

Fished for herring with Bentley at Trigelow (last year). Our share was 20 tonnes. During the season 20 tagged salmon, mainly from South Australia, some from Israelite Bay were caught in Doubtful Island Bay. About half of the catch was cleaned and the remainder taken in whole. In October 1976, 17 Sperm whales (*Physeter catadon*) stranded on Trigelow.

YEAR: 1978

Fishing team: Ron senior, Rod Frost, Roley Davis. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist. Boats: 4.6m jetboat, 4.1m Brooker, 3.8m bondwood. Nets: 310m nylon, 270m nylon, 250m nylon, 300m herring net. Fordson Tractor, 1.5t Wooden trailer. Trucks: 1973 Ford 7t red, 1976 Toyota Dyna 2t, 1968 Landrover yellow, R. Davis Nissan, 1976 Toyota Stout 1.5t. Fordson Tractor, 1.5t Wooden trailer. Salmon catch: 15.0t. Herring catch 1.7t. Caught 11 schools 2 March-28 March. Average school 1.4t. Other fishermen: Bentley at Trigelow, Morris at Bremer.

This was Heberles worst salmon season. Bentley caught even less. Introduced a third salmon net during the season. Fitted all beach vehicles and camp with Citizen Band (27 MHz) two way radios. Two small catches (0.4t) cleaned, the remainder sent in whole. Cyclone Alby caused some damage to the beach 4 April 1978 just after the last truck left.

YEAR: 1979

Fishing team: Ron senior, Rod Frost, Roley Davis, Kevin Heberle. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist. Boats: 4.6m jetboat, 4.1m Brooker, 3.8m bondwood. Nets: 320m nylon, 270m nylon, 260m nylon, 300m herring net. Fordson Tractor, 1.5t Wooden trailer. Trucks: 1973 Ford 7t red, 1976 Toyota Dyna 2t, 1968 Landrover yellow, 1962 Landrover Silver, R. Davis Nissan. Fordson Tractor, 1.5t Wooden trailer. Salmon catch: 114.2t. Caught 32 schools 2 March-11 April. Average school 3.6t. Other fishermen: Bentley at Trigelow, Morris at Bremer.

All weights are actual whole weights from 1979 onwards. For the first season since 1948, did not use a cleaning machine. One small school cleaned by hand. By July 1979 a further 20 km of Bremer Road was bitumenised, bringing the total to 40.6km and leaving only 26 km of gravel. During the season 11 tagged salmon from South Australia were caught in Doubtful Island Bay. Bremer bar open to the sea from June 1978 until March 1979.

YEAR: 1980

Fishing team: Ron senior, Rod Frost. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Harry Casey. Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 320m nylon, 270m nylon, 260m nylon, 300m herring net. Fordson Tractor, 1.5t Wooden trailer. Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1962 Landrover silver. Salmon catch: 78.5t. Caught 27 schools 3 March-6 April. Average school 2.9t. Herring catch 0.3t. Other fishermen : Bentley at Trigelow, Morris at Bremer.

Purchased a third salmon boat, a Stacer 4.2m aluminium rowing boat. A futher 9km of Bremer Road was bitumenised during 1979/80, leaving 16.5km to do. Hassells House at House Beach was destroyed in a fire. It was rebuilt on a new location further east by relatives of Hassells (Balls) but not until 1983. In August 1979, 13 killer whales (*Orcinus orca*) stranded on Trigelow and in September 1989 a further 22 whales (*Physeter catadon*) stranded near Gordon Inlet. The Bremer bar was closed from November 1979 until January 1982 allowing vehicle access across the bar.

YEAR: 1981

Fishing team: Ron senior, Rod Frost, Kevin Heberle. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Norm Casey. Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 320m nylon, 270m nylon, 260m nylon, 300m herring net. Fordson Tractor, 3t Trailer tandem, 1.5t Wooden trailer. Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1981 Toyota Hilux 1t, 1968 Landrover yellow, 1962 Landrover silver, RonH Landrover 4x4. Salmon catch: 92.6t. Caught 30 schools 23 February-4 April. Average school 3.1t. Herring catch: 0.5t. Other fishermen : Bentley at Trigelow, Morris at Bremer.

Hunts took over Southern Ocean Fish Processors foreshore (middle) factory during 1981.

YEAR: 1982

Fishing team: Ron senior, Rod Frost, Colin Tindale. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 340m nylon, 280m nylon, 270m nylon, 300m herring net. Fordson Tractor, 3t Trailer tandem, 1.5t Wooden trailer. Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1981 Toyota Hilux 1t, 1962 Landrover silver, RonH Landrover 6x6. Salmon catch: 88.7t. Caught 33 schools, 27 February-10 April. Average school 2.7t. Other fishermen : Bentley at Trigelow, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach, Morris at Bremer.

Purchased a second tractor (International) in time for use during 1982. This greatly reduced the difficulty of handling large schools. The bitumenising of Bremer Road was completed before July 1982. Amenities improved by introduction of colour television and a video cassette recorder. The Bremer bar was open to the sea from January 1982 until September 1982.

YEAR: 1983

Fishing team: Ron senior, Rod Frost, Colin Tindale. The following were present for part of the season: Ron Heberle Jr, Greg Heberle, George Gilchrist, Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 340m nylon, 280m nylon, 270m nylon, 300m herring net. Fordson Tractor, 3t Trailer tandem, 2t Trailer unlicensed. Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1981 Toyota Hilux 1t, R Frost Landrover, RonH Landrover 6x6. Salmon catch: 113.9t, Caught 36 schools 19 February-14 April. Herring catch 0.5t. Other fishermen : Bentley at Trigelow, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach, Morris at Bremer.

The Bremer bar was closed from September 1982 until August 1984 allowing vehicle access across the bar.

YEAR: 1984

Fishing team: Ron senior, Rod Frost, Colin Tindale. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 340m nylon, 280m nylon, 260m nylon, 300m herring net. Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1981 Toyota Hilux 1t, R Frost Landrover, RonH Landrover 6x6. Salmon catch: 134.1t. Caught 31 schools 27 February-5 April. Average school 4.3t. Other fishermen : Bentley at Trigelow, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach, Morris at Bremer.

Best salmon season since 1967. A severe storm 2-3 August 1984 caused severe dune erosion at Bremer Bay and at Doubtful island Bay ?

YEAR: 1985

Fishing team: Ron senior, Rod Frost, Colin Tindale. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Boats: 4.6m jetboat, 4.2m Stacer aluminium,

4.1m Brooker aluminium. Nets: 340m nylon, 280m nylon, 260m nylon, 300m herring net. Fordson Tractor, 3t Trailer tandem licenced, 2t Trailer unlicenced. Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1981 Toyota Hilux 1t, R Frost Landrover, RonH Landrover 6x6. Salmon catch: 200.9t. Caught 29 schools 6 March-8 April. Average school 6.9t. Other fishermen : Bentley at Trigelow, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach, Morris at Bremer.

The best season to date. Also largest single day catch (42.2 tonnes). During the season 4 tagged salmon from South Australia were caught. About 125 mm of rainfall in mid March caused numerous boggings. The Bremer bar was open to the sea from Sept 1984 until May 1985.

YEAR: 1986

Fishing team: Ron senior, Rod Frost. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 340m nylon, 280m nylon, 260m nylon, 300m herring net. Fordson Tractor, 3t Trailer tandem licenced, 2t Trailer unlicenced, 1.5t wooden trailer. Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1981 Toyota Hilux 1t, R Frost Landrover, RonH Landrover 6x6. Salmon catch: 111.5t. Caught 22 schools 1 March-31 March. Average school 5.1t. Other fishermen: Bentley at Trigelow, Wilsons at Bremer, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach.

On 5th March the Director of Fisheries gave approval for each Salmon team to sell up to 7t for rock lobster bait during 1986. For the first season since 1954 sold salmon to other than Hunts. Sold 33.5t to Hunts receivers, 45.8t to West Ocean Canning and 32.2t to Albany Bait Producers (Colley). No canning was done in Albany this season. Hunts closed down at midnight on 20 March. Deliveries to West Ocean and Colley for the following week were severely restricted due to insufficient freezer space. The Bremer bar was closed from May 1985 to July 1986.

YEAR: 1987

Fishing team: Ron senior, Rod Frost, Colin Tindale. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 340m nylon, 280m nylon, 260m nylon, 300m herring net. Fordson Tractor, 3t Trailer tandem licenced, 2t Trailer unlicenced, 1.5t wooden trailer, 1t Tandem trailer licenced. Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1981 Toyota Hilux 1t, R Frost Landrover, RonH Landrover 6x6. Salmon catch: 141.9t. Caught 27 schools 26 February-6 April. Average school 5.3t. Sold 22.46t to Albany Bait Producers (Colley) including 8t for bait. Sold 119.5t to Kailis & France. Other fishermen: Bentley at Trigelow, Wilsons at Bremer, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach.

Recovered 21 tagged salmon from South Australia during the season, the most ever. Third best season. The Bremer River bar was closed during 1987.

YEAR: 1988

Fishing team: Ron senior, Rod Frost, Colin Tindale. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 340m nylon, 280m nylon, 260m nylon, 300m herring net. Fordson Tractor, 3t Trailer tandem licenced, 2t Trailer unlicenced, 1.5t wooden trailer, 1t Tandem trailer licenced. Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1981 Toyota Hilux 1t, R Frost Landrover, RonH Landrover 6x6. Salmon catch: 64.2t. Caught 25 schools 3 March-4 April. Average school 2.6t. Other fishermen: Bentley at Trigelow, Wilsons at Bremer, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach.

Fitted International tractor with 1.5 tonne capacity Lansing Bagnall forklift which was used to lift CHEP pallets fitted with wire mesh or weld mesh bins (frames). Fish were thrown directly from net

into bins on trailers or beach vehicles, avoiding double handling. Set for herring about halfway between camp and corner. Bremer Fish Processors commenced operating in November 1988.

YEAR: 1989

Fishing team: Ron senior, Rod Frost, Colin Tindale. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 260m nylon, 550m herring net. Fordson Tractor, 3t Trailer tandem licenced, 2t Trailer unlicenced, 2t Trailer (Kailis & France). Trucks: 1973 Ford 7t red, 1979 Mitsubishi Canter 3t, 1981 Toyota Hilux 1t, R Frost Landcruiser. Salmon catch: 183.2t. Caught 43 schools 22 February - 6 April. Average school 4.3t. Herring catch 3.2t, last catch 8 April. Other fishermen: Bentley at Trigelow, Wilsons at Bremer, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach.

Second best Salmon season (after 1985). Added approx 400 metres of deeper net to herring net, improving catches. Set herring net with 5.1m clinker boat not used since about 1960. Navy survey ship HMAS Moresby (with helicopter) anchored in the bay during the season.

YEAR: 1990

Fishing team: Ron senior, Rod Frost. The following were present for part of the season: Ron junior, Greg Heberle, George Gilchrist, Clint Willis. Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker, 5.1m clinker. Nets: 340m nylon, 320m nylon, 280m nylon, 550m herring net. Trucks: 1973 Ford 7t red, 1976 Landcruiser 2t, 1981 Hilux 1t, R Frost Landcruiser. Tractors: Fordson, International, Nuffield. Trailers: 3t licenced, 2t (Kailis & France) licenced. Salmon catch: 40.5t, caught 36 schools 3 February-8 April, average school 1.1t. Herring catch: 1.22t. Mullet catch: 0.20t. Other fishermen: Bentley at Trigelow, Wilsons at Bremer, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach.

Went down to the coast on 17.12.1989 to attempt to catch herring. Set about 4 times in December-January but caught only 0.5t. Stayed at the coast until 9 April. Set for herring about 6 times in March-April but caught only 0.7t. Salmon price dropped from \$550 to \$350/tonne for canning and bait. Bait quota raised to 18t/team. Quotas of 1,200t for South Coast and 300t for West Coast introduced. Ron junior commenced full time fishing and purchased a 1976 Toyota Landcruiser and a Nuffield tractor, which he fitted with a 0.5t rear mounted crane. Set up a high-gain antenna for talking to Albany. Wildfires started by lightning on 15 December and 21 December 1989 in Fitzgerald National Park burnt 123,000 ha in the 328,026 ha park.

YEAR: 1991

Fishing team: Ron senior, Ron junior. The following were present for part of the season: Rod Frost, Greg Heberle, George Gilchrist, Kevin Willis. Boats: 4.6m jetboat, 4.2m Stacer aluminium, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 250m herring net. Tractors: Fordson, International, Nuffield. Trailers: 3t licenced, 1.5t licenced. Trucks: 1973 Ford 7t red, 1976 Landcruiser 2t, 1981 Hilux 1t, R Frost Landcruiser. Catch: 47.1t, caught 23 schools 2 March-5 April, average school 2.0t. Other fishermen: Bentley at Trigelow, Wilsons at Bremer, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach.

Fisheries Department set total allowable catch quotas of 2000 tonnes for South Coast (including sale of bait limit of 8t per licence) and 600 tonnes for West Coast (no limit for bait sales). Purchased net for mulies but very few schools sighted, net not used. Set for herring about five times but caught very few. Kailis and Schools's prices \$365/t for salmon, \$380/t for herring.

YEAR: 1992

Fishing team: Ron junior, Ron senior. The following were present for part of the season: Rod Frost, Greg Heberle, George Gilchrist, Mike McGuire, Don Phillips, Roy Bracknell, Bruce Tindale. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium. Nets: 340m nylon,

320m nylon, 280m nylon, 250m herring net. Tractors: Fordson, International, Nuffield. Trailers: 3t licenced, 1.5t licenced. Trucks: 1973 Ford 7t red, 1976 Landcruiser 2t, 1981 Hilux 1t. Catch: 54.9t, caught 27 schools 17 February-31 March, average school 2.0t. Other fishermen: Bentley at Trigelow, Wilsons at Bremer, Kevin Kennedy at House Beach, Colin Kennedy at Drages Beach.

Ron junior took over Ron senior's fishing licences prior to the start of the season. He fitted the Stacer with a jet unit driven by a Subaru 1800cc engine. Set for herring 5 times but caught none. The other fishermen did poorly also. Kailis and France paid \$400/t for both salmon and herring. Very few mulies sighted. Bremer bar closed.

YEAR: 1993

Fishing team: Ron junior, Ron senior, Rod Frost, Greg Heberle. The following were present for part of the season: George Gilchrist, Don Phillips, Wayne Larsen. Boats: 4.6m jet boat, 4.2m Stacer aluminium jet boat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Fordson, International, Nuffield. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t, 1976 Landcruiser 2t, 1981 Hilux 1t. Catch: 89.6t, caught 26 schools 24 February-14 April, average school 3.4t. Other fishermen: Bentley at Trigelow, Andy Wilson at Bremer, Craig Kennedy House Beach, Colin Kennedy at Drages Beach.

Ron junior purchased a 1978 International Acco 3070B prime mover with a 903 cubic inch 300 H.P. engine. He had this converted to a tip truck/tray top (15 feet tipper/20 feet tray). Kailis and France paid \$450/tonne for salmon and herring. Did not set for herring. It was a poor herring season in this area. Numerous small schools of mullet sighted but very few mulies. Bremer Bar open to the sea during the season.

YEAR: 1994

Fishing team: Ron junior, Ron senior, Rod Frost, Matt Rowney. The following were present for part of the season: Greg Heberle, Norm Casey, George Gilchrist. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Fordson, International, Nuffield. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t, 1976 Landcruiser 2t, 1981 Hilux 1t. Salmon catch: 234.4t, caught 36 schools 13 February-4 April, average school 6.5t. Mullet catch: 0.64t. Other fishermen: Bentley at Trigelow, Andy Wilson at Bremer, Craig Kennedy at House Beach, Colin Kennedy at Drages Beach.

Best season ever. Record daily catch of 50.3t made on 22 March. Gravelled first 100m of track after last season. Extended bathroom in shack and modified shed. Bremer bar still open to sea. Ferried small lots across bar by boat. Sold 57.9t to Bremer Fish Processors, 72.5t to Bevan Baits and 104t to Kailis & France. Salmon price \$440-\$450/t. One tag (from Tasmania) recovered.

YEAR: 1995

Fishing team: Ron junior, Rod Frost, Deon Utber. The following were present for part of the season: Greg Heberle, Norm Casey, John Collingwood, Ron Davis. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Fordson, International, Nuffield, Massey Ferguson. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t, 1976 Landcruiser 2t, 1981 Hilux 1t. Salmon catch: 102.7t, caught 31 schools, 4 March-5 April, average school 3.3t. Herring catch: 5.5t. Total salmon catch 102.7t plus 0.15t sold privately. Sold 13.8t to Princess Royal Seafoods, 20.4t to Bevan Baits, remainder to Bremer Bay Fish Processors. Other fishermen: Bentley at Trigelow, Andy Wilson at Bremer, Craig Kennedy at House Beach, Colin Kennedy at Drages Beach.

Salmon price \$450-\$500/t, Herring \$480/t. Modified verandah and store-room of house, adding septic toilet and relocated workshop to shed before season. Added permanent power plant room

under shed roof. Closed in east wall of shed, apart from door. Bremer River bar trafficable. Gravelled area in front of shed and put more on first 200m of track after last season. Purchased Massey Ferguson 65 with front-end loader. Mainly rough easterly weather for first three weeks of season. Helicopter surveying in area in early March. About 20 horses and riders visited beach 18 March. Firebreaks established by contractor for Shire along track from approx 9km to 14km peg (from camp) in mid March. Wayne and Cheryl Larsen's son in law washed off rocks south of Drages Beach and drowned 13 February.

YEAR: 1996

Fishing team: Ron junior, Rod Frost, Greg Heberle, Michael Scott. The following were present for part of the season: Norm Casey, George Gilchrist, Ron senior. Boats: 4.6m jet boat, 4.2m Stacer aluminium jet boat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Fordson, International, Nuffield, Massey Ferguson. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t , 1976 Landcruiser 2t, 1981 Hilux 1t. Catch: 114.8t, caught 29 schools, 10 February-8 April, average school 4.0t. Bremer River bar trafficable. Sold 24.11 t to Bremer Fish Processors, remainder to Princess Royal Seafoods. Other fishermen: Frank Bentley at Trigelow, Andy Wilson at Bremer, Craig Kennedy at House Beach, Colin Kennedy at Drages Beach.

Bevans fish factory burnt down before season. Fish prices typically \$450/t for salmon, \$400/t for herring. Set twice for herring. Gravelled hills on Harlands track in September 1995. Re-roofed shack in October 1995. Fitted shack with fly wire in January 1996. Painted outside of shack white in March 1996. Fitted Massey Ferguson tractor with front forks for carrying TNT pallets. Traded International tractor in on bigger front end loader April 1996.

YEAR: 1997

Fishing team: Ron junior, Rod Frost, Greg Heberle, Rod Frost, George Gilchrist. The following were present for part of the season: Norm Casey, Colin Tindale, Mike McGuire. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Chamberlain, Fordson, Nuffield, Massey Ferguson. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t, 1976 Landcruiser 2t, 1981 Hilux 1t. Frank Bentley at Trigelow. Catch: 63.2t, caught 20 schools, 7 March-4 April, average school 3.2t. Bremer River bar trafficable. Sold 27.3t to Bremer Fish Processors, remainder to Princess Royal Seafoods. Other fishermen: Frank Bentley at Trigelow, Craig Kennedy at House Beach, Colin Kennedy at Drages Beach.

Fish prices typically \$400-\$500/t for salmon, \$400?/t for herring. Set twice for herring. First season for Chamberlain Champion 9G front end loader. Used two front end loaders, carrying Chep pallets with mesh cages on front and rear, to move up to 2t of salmon at a time from the beach. Vessel "Sea Lion" visited beach 9 & 11 March during marine biological survey for CALM. Craig Kennedy set for herring at House Beach 21, 22, 23, 24 March for herring to be tagged by Fisheries Department. Penning of salmon prohibited.

YEAR: 1998

Fishing team: Ron junior, Rod Frost, Greg Heberle, Brad Tindale. The following were present for part of the season: Norm Casey, Mike McGuire, George Gilchrist, Andrew Heberle. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Chamberlain, Fordson, Nuffield, Massey Ferguson. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t , 1976 Landcruiser 2t. Catch: 107.9t, caught 17 schools 17 February-4 April, average 6.3t. Bremer River bar trafficable. Sold 41.8t to Bremer Fish Processors, remainder to Princess Royal Seafoods. Other fishermen: Craig Kennedy at House Beach, Colin Kennedy at Trigelow.

Fish prices typically \$400-\$500/t for salmon, \$400/t for herring. Set twice for herring. Concreted floor and extended house by adding one bedroom, in October 1997. Record catch of 57.1t on 15 March 1998. Used mainly 0.8t TNT pallets this season.

YEAR: 1999

Fishing team: Ron junior, Rod Frost, Greg Heberle, Brad Tindale. The following were present for part of the season: George Gilchrist, Brian Heberle, Andrew Heberle, Ryan Tindale. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Chamberlain, Fordson, Nuffield, Massey Ferguson. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t, 1976 Landcruiser 2t. Catch: 47.4t. Caught 17 schools, 10 March-29 March. Average school 2.8t. Bremer River bar not trafficable until 17.3.1999. Sold 13.2t to Bremer Fish Processors, remainder to Princess royal Seafood via Bonus Baits in Bremer Bay. Other fishermen: Colin Kennedy at Trigelow, Craig Kennedy at House Beach.

Fish prices typically \$430-\$450/t for salmon, \$350/t for herring. Set a few times for herring. Caught 4 tonnes one day but could not sell them. Caught 0.4t of garfish during the season. Virus (?) killed some 50% of Pilchard tonnage just before season, as in 1995. Ron cut wrist on angle grinder, wound turned septic, resulting in absence from beach 8-15 March. Used 0.5 tonne tubs for first time 27.3.1999. Used catching frames twice during season.

YEAR: 2000

Fishing team: Ron junior, Rod Frost, Greg Heberle, Brad Tindale. The following were present for part of the season: Brian Heberle, Phil Shephard, Murray Field. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Chamberlain, Fordson, Nuffield, Massey Ferguson. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t, 1976 Landcruiser 2t. Catch: 37.0t. Caught 20 schools 10 February-14 April. Average school 1.8t. Bremer River bar trafficable. Sold 36.36t salmon to Bremer Fish Processors, who processed salmon using machines from Albany. Sold 0.69t to Dennis Gaunt for restaurant consumption. Other fishermen: Colin Kennedy at Trigelow, Craig Kennedy at House Beach.

Fish prices \$475-\$500/t for salmon, \$400/t for herring. Did not set for herring, due to licence not endorsed correctly. Used blue Chep "Nally MegaBins 730 V10" 0.6 tonne capacity bins. Green Corps Coast Care Group did some work in February 2000, to confine vehicle access at House Beach and blow holes and close rubbish tips. Pilchard quotas for Albany and Bremer Bay zones cut to zero, from 1 April 2000. Hundreds of tonnes of herring sighted late in the season, but no markets.

YEAR: 2001

Fishing team: Ron junior, Rod Frost, Greg Heberle, Brad Tindale. The following were present for part of the season: Brian Heberle, Murray Field. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Chamberlain, Fordson, Nuffield, Massey Ferguson. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t, 1976 Landcruiser 2t. Catch: 70.4t. Caught 43 schools, 16 March-13 April. Average school 1.6t. Bremer River bar trafficable. Sold 19.4t salmon to Bremer Fish Processors and 51.0t to Princess Royal Seafoods in Albany. Other fishermen: Colin Kennedy at Trigelow.

Used F&T Industries 0.5 tonne capacity non draining plastic tubs, with ice to transport fish. Salmon prices \$400-\$435/tonne. Not permitted to set for herring. Craig Kennedy ceased fishing for herring at House Beach. Fordson tractor un serviceable, sold after season. New west and south walls in shack (lined) and new windows. Telstra CDMA mobile phone coverage available to the beach. On 1 April about 100 tonnes of salmon went past Trigelow in very rough conditions.

1963 PHOTOS from Graham Bowden



House Beach, showing Hunts aeroplane VH-ROD about to drop a message. Colin Joye and Ron Heberle.



Reef beach from south end, looking north west. Cullinane's shelter shed in the corner.

1970 PHOTOS from Graham Bowden



Camp on sandhill, about half way along Reef Beach. Runway to beach in foreground.



Salmon in net on Reef Beach. John Cleary's Land Rover, "Forby".

1970 PHOTOS from Graham Bowden



Fish pen (4 gates with wire netting) in south corner of Reef Beach.



Cleaning salmon in shelter shed at current location, Reef Beach. Rod Frost on brushes. Keith Gilchrist and John Cleary knifing. George Gaebler on header. Other 2 unknown.

1970 PHOTOS from Graham Bowden



Cleaning salmon in shelter shed at current location, Reef Beach. George Gaebler knifing. Rod Frost and Greg Heberle on brushes. Don Cleary knifing.



Cleaning salmon in shelter shed at current location, Reef Beach. Keith Gilchrist knifing. George Gaebler on header. John Cleary knifing. Rod Frost brushing.

1970-76 PHOTOS



In north corner at Peppermint Beach. Horses belong to farmers agisting stock during drought, 1970. Photo from Graham Bowden.



Loading net in to Brooker Aluminium row boat on Reef Beach. Les Wignell, Roley Davis, Ron Heberle (near jet boat), Rod Frost, 1976.

1976 PHOTOS



House at House Beach.



Herring in net from seine shot. Milanna, Ron senior, Ron junior, Greg Bracknell, X, Merilyn.



Toyota Stout with herring at Trigilow. Merilyn with Ron Heberle's Ford Falcon.



Lunch. Laurie McFarlane, Milanna, Ron, Rod and Sandra Frost, 1976.

1977 PHOTOS



Lookout on sandhill. Yellow Land Rover. Green Toyota Stout in shelter shed, which has Peppermint branches to provide shade.



New shack, in 1977. Toilet out the back, left. One water tank near door. Elevated tank for hot water system. Rod Frost's Volkswagon beach buggy. George Gilchrist's Honda 3 wheeler.

1977-79 PHOTOS



Camp, in 1977, looking north west. Mast of Rod Frost's surfcat at right.



Salmon in net on Reef beach. Ron senior, rod Frost (on Fordson), Roy and Queenie, Roley Davis, norm, Julie and Harry Casey. Yellow Land Rover. Roley 's Nissan.

1979 PHOTOS



Loading net in to jet boat. George Gilchrist, Roley Davis, Rod Frost.



Pulling net by hand, Reef Beach. Julie Casey, Rod Frost, 1979.

1981 PHOTOS



Jet boat returning to shore after "shooting" net around large school of salmon. George Gilchrist's Landcruiser, Silver Land Rover, 1981.



Salmon in net near camp. Norm Casey, Rod Frost, George Gilchrist, Rob Adamson (and his Land Rover), Ron junior, Kevin, Ron senior, Sandra Frost. Silver Land Rover (left), Fordson and 3t trailer.

1983 PHOTOS



Camp. Net spread out. Yellow Toyota Hilux (foreground), Greg's caravan.



Tindale's caravan (left), old caravan, Ron's Subaru, Ron's Land Rover 6x6.



Camp, 1983. Greg's caravan. Greg's car tent.



Toyota Dyna, Fordson tractor.

1983 PHOTOS



Susan with small boat used for herring set.



Tindales and Heberles. Runway to old camp is in the background, 1983.



Motorcycles used for spotting salmon schools. Greg on Honda XR75, George Gilchrist's 3 wheeler at right, 1983. Photo from Milanna Heberle.



International tractor, Stacey, Tania, X, on Reef Beach 1983.

1983 PHOTOS



Cleaning vehicles and trailers after unloading. International tractor and wooden trailer, Silver Land Rover, Fordson tractor and steel trailer, Land Rover 6x6. Colin Tindale, Brian Heberle.



Loading net in to Brooker aluminium boat. Ron senior, Colin Tindale, Rod Frost, George Gilchrist, Ron junior, Brian.

1985 PHOTOS



One tonne school of salmon at House Beach, 1985.



Salmon from jet boat shot, in net between International and Fordson tractors. Colin Tindale, George Gilchrist, Ron junior, Pauline, Ron senior, Rod Frost.

1985 PHOTOS



New house built on lease at House Beach, to replace old house burnt down in 1980. New house has same floor plan as old house.



6 tonne school of salmon behind reef on Reef Beach (at low tide).

1985 PHOTOS



Loading steel trailer, towards south corner of Reef Beach. Ron senior and Greg Heberle.



Launching jet boat, Ron senior, Ron junior, Greg Heberle, Rod Frost. Photo from Patricia Heberle.

1988 PHOTOS



Loading salmon in to Chep bins on Land Rover 6x6. Colin Tindale, Ron senior, Ron junior, Rod Frost, George Gilchrist.



Using International tractor to pull in herring net. Ron junior, George Gilchrist, Rod Frost, Ron senior.

1989 PHOTOS



Herring net in 5.1m Clinker boat, pulled by Rod Frost's Landcruiser. Colin Tindale's yellow boat has anchors.



Loading herring in to Chep crate from pocket, 1989.

1990 PHOTOS



Loading Red Ford from Hilux and trailer towed by Fordson 1990.



Dolphin washed up on Reef Beach 1990.

1990-93 PHOTOS



Camp in off season, Andrew Heberle c1990. Photo from Patricia Heberle.



Loading salmon in to crates on trailer. Rod Frost, Don Phillipps, Pauline Heberle, 1993.



Loading salmon in to crates on Landcruiser. Ron junior, Don Phillipps, Rod Frost, George Gilchrist, 1993.

1993 PHOTOS



Loading International truck, using fork lift. Chep crate in foreground.



Camp looking south, in 1993.

1993 PHOTOS



Lunch in shack, showing new kitchen cabinet. Susan, Ron, Andrew, Pauline Heberle 1993.



Loading net in to Stacer aluminium boat. Rod Frost, Don Philipps, George Gilchrist.



Getting ready to load salmon on to Toyota Landcruiser 1993.

1994 PHOTOS



Using Nuffield crane to load Stacer jet boat on to trailer. George Gilchrist, Don Phillips, Ron junior.



Foreground; small aluminium boat used to pick up anchors.

1995 PHOTOS



Camp, looking south, in 1995.



Commercial fishing area sign, adjoining run way on to beach.

1996 PHOTOS



Salmon in net. Anchoring net off shore. Derben jetboat LFB A110, Nuffield tractor 1996.



Herring on Toyota Landcruiser 1996.

1996-98 PHOTOS



3 sharks caught with school of salmon. Landcruiser and trailer, Massey Ferguson tractor 1996.



Andrew and Matthew Heberle in kitchen 1998.

1998-99 PHOTOS



57 tonne school 15 March 1998, near south corner of Reef Beach.



Camp in 1999, 3 tractors, 0.5 tonne tubs on Landcruiser.

1999 PHOTOS



Tipping salmon in to crate, from catching frame, using Chamberlain tractor. Brad Tindale, Rod Frost 1999.



Foreground: George Gilchrist tipping salmon in to crate, from catching frame, using Chamberlain tractor. X, Ron Heberle. Back: using catching frame inside net, to remove salmon from net 1999.

2000 PHOTOS



Camp from look out, looking east, in 2000.



Using Chamberlain tractor to unload tubs from International truck.

2001 PHOTOS



Camp looking north in 2001. New south wall on shack.



Brad Tindale and Brian Heberle filling 0.5 tonne non draining bins. White bin has ice.

2002 PHOTOS



Cool room in shed, in middle section. 2 white ice bins at right.



Cool room in shed, with room for 4x 0.5t bins with ice. Ron Heberle.

2002-03 PHOTOS



Inside of shack, showing lining done 2002.



Using blue Nuffield and orange Chamberlain tractors to pull in herring net. Brad Tindale, Rod Frost, Susan Heberle 2003.

2003 PHOTOS



Setting herring net from rocks near south corner of Reef Beach.



Loading salmon and herring in to 0.5t bins from herring net. Ron, X, Rod Frost.

2003 PHOTOS



New toilet block at north west end of House Beach 2003.



Salmon net in box, for quick loading and unloading. Herring net was set with same boat. Rod Frost and Brad Tindale.

2003-04 PHOTOS



Some of the whales washed up on Reef Beach 25.9.2003. Photo from Susan Heberle 28.9.2003.



Camp looking east, in 2004.

2004 PHOTOS



Salmon in net between red Massey Ferguson tractor and blue Nuffield tractor. Alan Murdoch, Rod Frost, Jamie Frost 2004.



Massey Ferguson tractor, with rear mounted capstan winch. Two 0.5t bins, ice bin.

YEAR: 2002

Fishing team: Ron junior, Rod Frost, Greg Heberle, Brad Tindale. The following were present for part of the season: George Gilchrist, Andrew Heberle. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium. Nets: 340m nylon, 320m nylon, 280m nylon, 300m herring net. Tractors: Chamberlain, Nuffield, Massey Ferguson. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t, 1976 Landcruiser 2t. Catch: 59.6t. Caught 43 schools, 20 February-12 April. Average school 1.4t. Bremer River bar not trafficable. Sold 52.2t salmon to Bremer Fish Processors and 7.4t to Austral Fisheries in Albany. Other fishermen: Colin Kennedy at Trigelow.

Salmon prices \$400-\$420/tonne. Permitted to set for herring but advice in writing not received until after season finished. Ron lined the main room in the house and fitted a fly screen door. Installed cold room (2.4mx2.4mx2.4m) in shed.

YEAR: 2003

Fishing team: Ron junior, Rod Frost, Greg Heberle, Brad Tindale. The following were present for part of the season: George Gilchrist, Jamie Frost, Phil Shephard. Boats: 4.6m jetboat, 4.2m Stacer aluminium jetboat, 4.1m Brooker aluminium, 3.6m row boat LFB A110C. Nets: 340m nylon, 320m nylon, 280m nylon, 280m nylon, 360m herring net. Tractors: Chamberlain, Nuffield, Massey Ferguson. Trailers: 3t licenced, 1.5t licenced. Trucks: 1978 International 12t, 1996 Hilux 1t. Salmon catch:15.1t, caught 16 schools 6 March-5 April, average school 0.9t. Herring catch:19.8t. Other fishermen: Colin Kennedy at Trigelow.

Bremer Bar trafficable. Replaced outside wall and roof on bathroom, toilet and workshop. Replaced Landcruiser with dark blue 1996 Toyota Hilux diesel. Removed crane from Nuffield tractor. Purple titled land Doubtful Bay to Peppermint to be auctioned in June 2003. Used DVD player for first time. Salmon \$420-\$430/tonne, herring \$400/tonne. Made up extra net for row boat, on wooden frame, to facilitate loading into boat by front end loader forks. Thousands of tonnes of salmon sighted in Fosters-Reef Beach area June 2002-February 2003. Aluminium rowing boat 34842 registered as LFB A110C. Toilet installed at House Beach. Second worst salmon season ever (15.1t), after 15.0t in 1978. Best herring season on this beach (19.8t).

YEAR: 2004

Fishing team: Ron junior, Rod Frost. The following were present for part of the season: Greg Heberle, Alan Murdoch, Brian Heberle, Andrew Heberle, Don Phillips, Jamie Frost, Patricia Heberle. Boats: 4.6m Jetboat LFB A110, 4.2m Jetboat LFB A110B, 4.1m Brooker LFB A110A, 3.6m row boat LFB A110C. Nets: 340m nylon, 320m nylon, 280m nylon, 280m nylon, 300m nylon, 400m herring net. Chamberlain tractor, Nuffield tractor, Massey Ferguson tractor. Trucks: 1978 International 12t, 1996 Hilux 1t. Trailers: 3t licenced, 1.5t licenced. Catch: 21.2t, caught 14 schools, 10 March-4 April, average school 1.5t. Other fishermen: Colin Kennedy at Trigelow.

Bremer Bar trafficable. Location 1307 (adjoining Reef Beach) passed in at auction 22.8.2003, sold soon after for c\$400,000. Salmon \$400/tonne. Nine sperm whales stranded on the reef in September 2003. Thousands of tonnes of salmon sighted at Fosters Beach until February 2004. A 200 tonne school of salmon sighted on Bremer Beach 11-12 March. About 1km of new track put in to replace track being covered by sand hill near Peppermint Beach. Fitted red tractor with rear mounted capstan winch. Set the herring net once 25-26 March, caught about 10t of Herring, which could not be sold, so were released. Sighted about 10 schools of sea mullet and about 10 schools of herring during the season. On 10.4.2004, Ron Heberle commenced work as manager of Albany Bait Producers (previously owned by Colley, now owned by a syndicate of local fishermen). This could be Heberles last fishing season.

REFERENCES

Andre George W (1999) "Dad's story". Access Press, Bassendean WA.

Berndt PM (1973) "Aborigines of SW Australia" Journal RSWA.

Bignell M (1977) "The fruit of the country. A history of the Shire of Gnowangerup, W.A." University of W.A. Press.

Cappo M (1987) "The biology and exploitation of Australian salmon in South Australia". SAFish Vol 12 (1) July-Sept 1987.

Cribb A (1993) "Where be the Salmon, Piscator ?" Western Fisheries Autumn 1993 issue p39-40. Fisheries Dept of W.A.

Department of CALM (1991) "Fitzgerald national park management plan 1991-2001". Management plan No.15.

Department of CALM (1992) "South coast region management plan 1992-2002". Management plan No.24.

Department of Conservation and Environment (1984) "Jerramungup coastal district draft management plan". Bulletin 167.

Department of Planning and Urban Development (1994) "Doubtful Islands Area coastal plan".

FINS (1968) "Australian salmon. Research and tagging programmes". 1 (4) p7-14.

Harden-Jones FR (1984) "A view from the ocean. In "Mechanisms of migration in fishes." p1-26. Eds McCleave JD, Arnold GP, Dodson JJ, Neill WH. Plenum Press, New York 574pp.

Heberle GW (1985) "Heberle family salmon fishing Doubtful Island Bay WA 1946-1985". Unpublished (Volume 1). Available on the Internet.

Heberle GW (1993) "Heberle family salmon fishing history Doubtful Island Bay Volume 2-1962 onwards". Unpublished. Available on the Internet.

Heberle GW (2005) "Heberle family 1500-2005". Book, 202 pages, published by Ocean Publishing Perth WA.

Heberle RL (1988) "The Country Fish Supply". p395-400. In Anderson R (1988 Editor) Katanning, a century of stories. Published by Katanning Shire Council.

Heberle RL (c2000) "Heberle family fishermen 1929-36". Unpublished notes 2 pages.

Jones K (1999) "Australian salmon (*Arripis truttacea*) Fishery Assessment Report to PIRSA for the Marine Scale Fish Fishery Management Committee". Primary Industries & Resources SA.

Klinowska M (1985) "Cetacean live stranding sites related to geomagnetic topography". Aquatic Mamm. 1: p27-32.

Lenanton RCJ (1984) "The commercial fisheries of temperate Western Australian estuaries: Early settlement to 1975". Department of Fisheries & Wildlife.

Lenanton RCJ, Joll L., Penn J. & Jones K. (1991) "The influence of the Leeuwin current on coastal fisheries of Western Australia". J of R Soc of WA. Vol 74 p101-114.

Malcolm WB (1961) "The Australian Salmon" Fisheries Newsletter 20 p17-22.

Malcolm WB (1967) "Australian salmon span a continent". Aust Fisheries Newsletter 26 (10) p23-26.

Mell DJ (1988) "An operational perspective of the rescue of False killer whales (*Pseudorca crassidens*) stranded at Augusta in July 1986". In Marine mammals of Australia. Augee ML (Ed), Roy. Zoo. Soc. NSW p44-57.

Pearce AF (1991) "Eastern boundary currents of the Southern hemisphere". J of R Soc of WA Vol 74 p35-45.

Stanley CA (1978) "Area of distribution, movements, age composition and mortality rates of the Australian salmon population in Tasmania, Victoria and NSW". Aust J Mar Freshw Res. 29 p417-433.

Stanley CA (1979) "Decline in W.A. salmon catch" Australian Fisheries 1 (3) P14-17.

Walker MH (1982) "The present state of the W.A. fishery for Australian salmon" Dept of Fisheries & Wildlife Report 52.

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Keith Gilchrist, 31
Ken Gilchrist, 31, 32
Kevin, 3, 35
Kevin Willis, 38
Laurie Balcombe, 29
Les, 3, 23, 24, 25, 26, 27, 28, 29
Les Wignell, 33, 34
Matt Rowney, 39
Matthew, 3
Max Howells, 33
Merv Gilchrist, 29, 31
Michael Scott, 39
Mike McGuire, 38, 40
Milanna, 3
Murray Field, 41
Noel Tompkins, 32

Norm, 3, 24, 25, 26, 33
Norm Casey, 3, 34, 35, 39, 40
Patricia, 3, 42
Pauline, 3
Peter Bertola, 31
Peter Johns, 30, 31
Phil Shephard, 41, 42
Robert Hall, 33
Rod Frost, 3, 32, 33, 34, 35, 36, 37,
38, 39, 40, 41, 42
Roley Davis, 3, 32, 33, 34, 35
Ron Davis, 39
Ron junior, 3, 31, 32, 33, 34, 35, 36,
37, 38, 39, 40, 41, 42
Ron senior, 3, 23, 24, 25, 26, 27, 28,
29, 30, 31, 32, 33, 34, 35, 36, 37,
38, 39
Roy Bracknell, 38
Ryan Tindale, 40
Sandra Frost, 3
Susan, 3
Ted Bugg, 31
Walter Collingwood, 30
Wayne Larsen, 38

1937-46 PHOTOS from Cyril Heberle



Wool shed, house, fences at House Beach 1937.



Cyril Heberle and old shack at Cape Riche 1946.

1946 PHOTOS from Cyril Heberle



Cyril, Ron, Norm Heberle landing shark near old shack at Cape Riche 1946.



Peg and Pauline Heberle in boat at Pallinup 1946.

1946 PHOTOS from Cyril Heberle



Pauline Heberle on Colin Gray's horse "Gypsy" and 3.8m clinker boat, at Reef Beach 1946.



Pauline & Ron Heberle with sharks, 5.5m launch, 3.8m clinker at Reef Beach 1946.



Cyril & Eric Heberle with 1942 Lease lend truck, carrying 3.8m clinker boat. On the trailer is the 5.5m launch "Imelda". On the way to Cape Riche 1946.

1946-47 PHOTOS from Cyril Heberle



Les, Ron and Cyril Heberle un-meshing salmon on the rocks at the south end of Reef Beach 1946.



Pauline Heberle un-meshing salmon on the rocks at the south end of Reef Beach 1947. Boat is 3.8m Clinker.

1947-48 PHOTOS from Cyril Heberle



Les, Ron, Cyril, Eva and Norm Heberle in camp at south end of Reef Beach.



Forby and Mako shark at Reef Beach.



Peg Heberle with shark at Reef Beach.

1948 PHOTOS from Cyril Heberle



Peg Heberle, Pattie Lewis, 2 boats at Pallinup 1948.



Ron, Pauline, Peg Heberle with King George Whiting at Pallinup 1948.

1949 PHOTOS from Cyril Heberle



Eric, Peg Heberle with sharks at House Beach 1949.



X, Allen Daniels, Roma Wann and Peg Heberle at Reef Beach. Also shows "Forby" and shark.

1949 PHOTOS from Cyril Heberle



Ron Heberle in camp at south end of Reef Beach.



Heberles and Wanns with first cleaning machine at Trigelow.



Heberles and Wanns at Trigelow.



Heberles and Wanns with "Forby" at Trigelow.

1950-51 PHOTOS



Heberles Katanning Ice Factory 1950. Photo from Ron Heberle.



Greg and Marilyn Heberle with sharks at Reef Beach. Also shows shelter shed with ice box. Photo from Cyril Heberle.

1952 PHOTOS



Greg Heberle with sharks at House Beach. Also shows the 1942 Lease lend truck. Photo from Cyril Heberle.



View inland from rear of house at House Beach in 1952, showing "buff truck". Photo from Pauline Heberle.

1953-56 PHOTOS



Dead fish at Pallinup in 1953. Photo from Ron Heberle.



Ron Heberle with outboard motor near House Beach. Photo from Pauline Heberle.



Vi, Ian, Alana, Kevin, Norm and Ross Heberle, with Lease lend truck at the Nightwell in 1956. Photo from Ross Heberle.

1959 PHOTOS



Ross, Alana, Ian and Ross Heberle at Cape Riche in 1959.
Photo from Ross Heberle.



Ernie Coyne and John Cleary outside the house at House Beach in 1959.
Photo from Ken Gilchrist.

1963-67 PHOTOS



House Beach, showing the house, Green Ford and "Forby" in 1963. Photo from Graham Bowden.



Cutting throats of salmon in the shelter shed on the beach at Reef Beach, in 1967. Cleve Johns in the foreground. Photo from Ken Gilchrist.

1976 PHOTOS



Greg Bracknell, Milanna and Ron Heberle in lookout at Reef Beach 1976.



Ron, Greg Bracknell, Pauline and Milanna Heberle outside shack at Reef Beach 1976.

1976 PHOTOS



Ron Heberle junior and Ron Heberle senior in the shack at Reef Beach 1976.

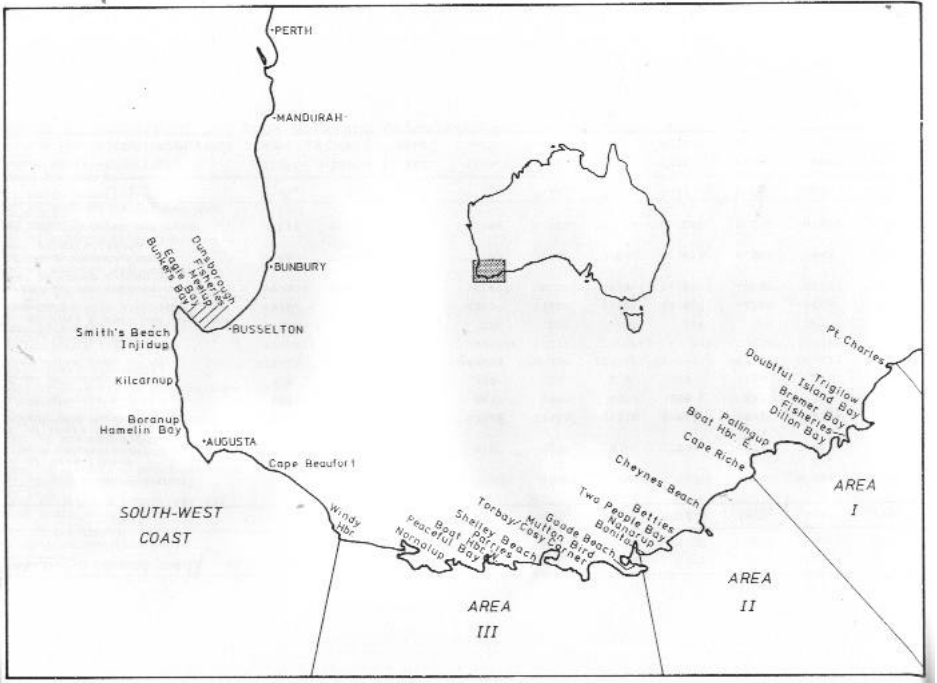


Frank Bentley, X, Ron Heberle, herring fishing at Trigelow, 1976.

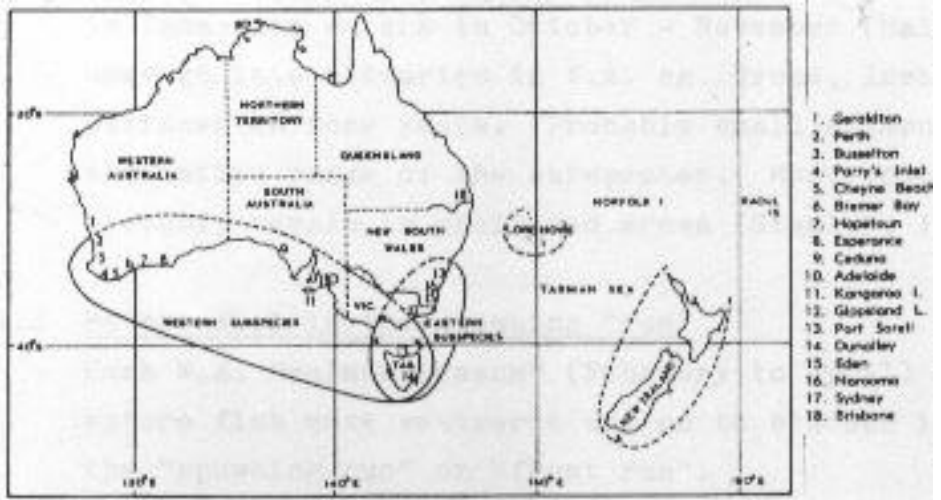


Milanna Heberle in the shower room.

Appendix 1 SALMON BEACHES 1982 (from Walker, 1982)



Appendix 2 SALMON DISTRIBUTION (from Malcolm 1961)



Appendix 3 SALMON CATCHES

YEAR	Heberle catch	Heberle %	Total catch WA
1941/42	0	0.0%	27
1942/43	0	0.0%	23
1943/44	0	0.0%	23
1944/45	0	0.0%	45
1945/46	25	13.7%	182
1946/47	65	16.8%	386
1947/48	60	4.8%	1250
1948/49	24	1.0%	2523
1949/50	20	0.9%	2250
1950/51	66	4.3%	1544
1951/52	48	4.0%	1201
1952/53	43	2.4%	1812
1953/54	113	4.1%	2732
1954/55	47	2.3%	2016
1955/56	29	1.3%	2169
1956/57	67	3.4%	1961
1957/58	67	3.6%	1878
1958/59	74	4.0%	1831
1959/60	59	4.7%	1246
1960/61	23	2.4%	955
1961/62	81	3.2%	2520
1962/63	18	1.3%	1435
1963/64	44	2.1%	2098
1964/65	80	5.2%	1546
1965/66	95	3.2%	2958
1966/67	171	4.7%	3660
1967/68	120	2.8%	4223
1968/69	41	1.8%	2293
1969/70	62	2.7%	2318
1970/71	29	1.9%	1495
1971/72	83	4.6%	1792
1972/73	30	2.6%	1164
1973/74	22	1.8%	1256
1974/75	61	4.8%	1283
1975/76	30	2.8%	1086
1976/77	74	4.9%	1518
1977/78	15	2.0%	755
1978/79	114	9.6%	1191
1979/80	78	6.2%	1260
1980/81	93	6.8%	1374
1981/82	89	5.8%	1547
1982/83	114	4.5%	2518
1983/84	134	3.8%	3543
1984/85	201	8.3%	2417
1985/86	111	3.8%	2941
1986/87	142	7.7%	1852
1987/88	64	4.4%	1444
1988/89	183	15.6%	1176
1989/90	40	2.5%	1593
1990/91	47	2.7%	1761
1991/92	55	4.6%	1202
1992/93	90	3.4%	2666
1993/94	234	11.5%	2034
1994/95	103	2.7%	3747

1995/96	115	4.3%	2687
1996/97	63	2.4%	2597
1997/98	108	4.1%	2608
1998/99	47	2.7%	1752
1999/00	37	1.4%	2598
2000/01	70	2.9%	2392
2001/02	60	2.3%	2623
2002/03	15	0.8%	1892
2003/04	21		
AVERAGE	73t	4.0%	1820t

Appendix 4 HERRING CATCHES

YEAR	Heberle catch (tonnes)		Heberle % of WA catch	Total catch WA (tonnes)
1952/53	0.0			354
1953/54	0.0			343
1954/55	0.0			403
1955/56	0.0			324
1956/57	0.0			460
1957/58	46.0	With N Sharpe	11.6%	395
1958/59	60.0	With N Sharpe	9.6%	624
1959/60	14.7	At House Beach	3.0%	489
1960/61	4.6	At House Beach	1.1%	416
1961/62	0.0	At House Beach		353
1962/63	5.3	At House Beach	1.4%	381
1963/64	0.0	At House Beach		240
1964/65	1.0	At House Beach	0.2%	400
1965/66	0.0	At House Beach		426
1966/67	0.0	At House Beach		322
1967/68	0.0	At House Beach		338
1968/69	0.0	At House Beach		619
1969/70	0.0	At House Beach		615
1970/71	6.4	At House Beach	0.9%	734
1971/72	43.9	With Bentley	5.1%	866
1972/73	56.5	With Bentley	4.8%	1187
1973/74	50.3	With Bentley	5.3%	952
1974/75	21.9	With Bentley	2.8%	794
1975/76	8.7	With Bentley	1.4%	639
1976/77	20.0	With Bentley	4.0%	503
1977/78	1.7	At House Beach	0.2%	811
1978/79	0.0	At House Beach		913
1979/80	0.3	At House Beach	0.03%	776
1980/81	0.5	At House Beach	0.07%	745
1981/82	0.0	Reef Beach		796
1982/83	0.5	Reef Beach		935
1983/84	0.0	Reef Beach		1081
1984/85	0.0	Reef Beach		1250
1985/86	0.0	Reef Beach		838
1986/87	0.0	Reef Beach		980
1987/88	5.2	Reef Beach	0.4%	1264
1988/89	3.2	Reef Beach	0.3%	1251
1989/90	1.2	Reef Beach	0.1%	1207
1990/91	0.0	Reef Beach		1518
1991/92	0.0	Reef Beach		1520
1992/93	0.0	Reef Beach		783
1993/94	0.0	Reef Beach		1001
1994/95	5.5	Reef Beach	0.7%	788
1995/96	0.0	Reef Beach		1066
1996/97	0.0	Reef Beach		1083
1997/98	0.0	Reef Beach		764
1998/99	0.0	Reef Beach		744
1999/00	0.0	Reef Beach		841
2000/01	0.0	Reef Beach		759
2001/02	0.0	Reef Beach		600
2002/03	19.8	Reef Beach	3.8%	527
AVERAGE	8 t		1.0%	786 t

Appendix 6A DAILY SALMON CATCHES 1949-1959 (tonnes whole)

YEAR	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
JAN 19							6.6				
FEB 7							0.7				
FEB 15						4.8					
FEB 19						3.1					
FEB 20											3.7
FEB 21						9.8					
FEB 25						4.3					
FEB 27						5.8					5.5
MAR 1						12.1					
MAR 2											
MAR 3					6.0				5.0		
MAR 4						3.9				6.6	
MAR 5				4.1		8.8					
MAR 6							4.5				
MAR 7				3.0			2.8		1.6		
MAR 8						4.3			2.8		3.0
MAR 9					7.0					1.7	
MAR 10				1.3				2.4		2.4	
MAR 11	7.1	5.3	5.7		5.0				1.7		5.1
MAR 12				3.4					1.4	4.4	
MAR 13			4.0	1.6	2.6	1.9	1.3		3.8		
MAR 14				2.2							
MAR 15	3.9		6.8		9.4	4.4			2.3		1.5
MAR 16			5.2					2.0			9.9
MAR 17				2.5		6.0			4.9		
MAR 18		1.0			6.0	3.8	1.1				
MAR 19						5.0					
MAR 20			4.4	5.0	0.9	8.7	4.3		4.4	1.0	
MAR 21	5.9	5.2					0.7	4.9			
MAR 22			4.6	7.3	2.9				5.0	1.7	9.2
MAR 23						11.9			7.0		
MAR 24		3.4	7.0		1.2		1.2				11.2
MAR 25					1.4				3.7	5.2	
MAR 26			7.9	3.5			1.5		2.1	8.1	
MAR 27		0.4		2.4		12.3		2.5			
MAR 28	6.7		3.2	5.4						3.6	
MAR 29		5.0	6.2		0.3		1.9				12.1
MAR 30											
MAR 31				1.6					2.2	3.9	7.9
APR 1			11.3	3.3			0.6		9.5	3.1	
APR 2							2.7			4.4	
APR 3				1.4		1.8		1.8			
APR 4								7.3			4.5
APR 5							1.7		1.0		
APR 6				0.0			3.6		1.3	4.9	
APR 7							2.0				
APR 8								0.9		7.5	
APR 9							1.5		3.9	6.5	
APR 10							3.2		3.3		
APR 11							3.1	5.8			
APR 13								1.0			
APR 14										0.9	
APR 17										0.9	
APR 18							1.6				
TOTSEAS	23.6	20.4	66.3	47.9	42.9	112.8	46.5	28.6	67.0	66.9	73.6

Appendix 6B DAILY SALMON CATCHES 1960-1969 (tonnes whole)

DATE	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
FEB 19			4.0			6.7				
FEB 20-21	0.8							1.3		
FEB 22	8.2								0.5	
FEB 23		2.8						3.6		
FEB 24						1.6				
FEB 25								2.9		
FEB 27								7.3	0.6	
FEB 28	2.6									4.4
MAR 1						3.3		5.0		
MAR 2					2.2		1.3	3.4		2.1
MAR 3						2.3		5.1		3.1
MAR 4	11.9				1.8			5.3		
MAR 5	3.5	1.7					8.3	7.7		
MAR 6	4.7						3.1	10.6		1.1
MAR 7	4.9		10.9		6.9	5.0	1.2			
MAR 8	3.1								2.1	1.1
MAR 9		1.0	3.5					11.1		
MAR 10	3.5			1.3	1.0					
MAR 11	1.1		17.9					3.8		0.8
MAR 12	4.3	1.1				13.2	5.4	9.0	2.9	0.6
MAR 13			12.4		3.6			4.2		
MAR 14							2.3		6.2	2.7
MAR 15					2.8	1.2	11.6			4.0
MAR 16								9.7		
MAR 17		0.4	2.5			5.2		13.8		
MAR 18					4.3					3.6
MAR 19					3.2	1.8	6.8	7.2	8.9	0.7
MAR 20									2.2	
MAR 21			2.2		2.8	4.3	6.3	8.2		
MAR 22			4.3	4.1					15.0	3.5
MAR 23	2.2	5.3				4.8	6.8	3.8	1.6	2.5
MAR 24			3.8		13.9			9.0		0.9
MAR 25	1.0					7.2		7.1		
MAR 26		1.1				2.8	4.2	8.2	15.9	0.7
MAR 27			16.5					1.8	6.5	1.1
MAR 28		3.2				6.8	3.1	5.7		
MAR 29		2.6					2.4	5.7		4.1
MAR 30				3.2		3.7				
MAR 31	0.5				1.4		3.8		19.1	1.0
APR 1		2.9				2.8	1.8	1.3		
APR 2						1.4				1.0
APR 3	4.0			4.5			1.3			1.5
APR 4		1.0					6.6		10.8	
APR 5						3.8	6.5	5.1	13.2	
APR 6										
APR 7			2.7				5.3		9.3	0.7
APR 8	1.7					2.3		3.8		
APR 9									0.9	
APR 11							2.4		0.7	
APR 12				2.9						
APR 13				1.9						
APR 14				0.5			2.3			
APR 15							2.6		1.7	
APR 18-19	1.2								2.0	
TOTSEAS	59.2	23.3	80.7	18.3	43.9	80.2	95.3	170.8	120.3	41.4

Appendix 6C DAILY SALMON CATCHES 1970-1979 (tonnes whole)

DATE	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
FEB 19	2.2									
FEB 20		1.1								
FEB 22	0.7									
FEB 26			6.7							
FEB 27								3.9		
FEB 28			5.6							
MAR 1		0.7								
MAR 2			4.0			0.4	2.3		2.0	1.8
MAR 3									1.1	
MAR 4		3.3			2.1	3.0		3.0		0.4
MAR 5			0.8			8.2				0.6
MAR 6							1.1			
MAR 7	10.6	0.8						1.5	1.9	
MAR 8				0.3						5.8
MAR 9	6.9	3.5	2.5		0.5					
MAR 10			0.9							0.9
MAR 11	4.0						1.4			9.2
MAR 12		0.6	13.1	2.9	0.8			0.6	0.3	6.2
MAR 13	5.2			0.9	4.7		0.8	16.5		
MAR 14		1.6	3.9	2.0	1.4	5.0	0.4	5.3		
MAR 15	1.6			0.8		1.6		1.1		4.8
MAR 16			6.1			10.3	1.6	8.0		
MAR 17	2.1	1.2	3.9		0.8	2.5		5.0		2.7
MAR 18				1.5		1.1				0.4
MAR 19	2.0	2.7	3.7	0.8		3.1	1.6	0.8		11.0
MAR 20			3.3		0.7	1.3		0.7	2.7	
MAR 21			1.3				9.7			2.1
MAR 22						3.9	2.6	3.1	0.3	
MAR 23	5.1		6.3				0.5			7.7
MAR 24		1.6		1.9		7.7		1.0	3.9	
MAR 25			0.3	3.0		3.9	5.7			10.0
MAR 26		2.6	4.6	1.1		1.9		2.5		2.8
MAR 27									1.7	
MAR 28						1.3		0.8	1.1	
MAR 29		1.4	0.4	3.8	5.3	0.4				2.1
MAR 30	3.5		3.2	1.2	1.7	1.4	0.3			1.4
MAR 31	2.0	2.3		0.9	2.7	2.1				
APR 1	1.0		8.2							18.5
APR 2	1.6	0.9		1.8			1.8			15.2
APR 3				2.6				13.3		0.4
APR 4	2.7	0.4	3.4					6.2		0.9
APR 5										0.6
APR 6										7.6
APR 7						1.5				
APR 8	6.4	2.5	0.3		0.8			0.5		
APR 9	1.9	0.8		0.7						
APR 11										1.1
APR 12	2.1	1.0		3.7						
TOTSEAS	61.7	29.0	82.5	29.9	21.7	61.0	29.7	73.8	15.0	114.2

Appendix 6D DAILY SALMON CATCHES 1980-1989 (tonnes whole)

DATE	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
FEB 19				1.3						
FEB 22										10.9
FEB 23		0.5								
FEB 25				2.3						
FEB 26		0.9						1.3		
FEB 27			3.4		4.0					
FEB 28				0.5	2.2					1.2
MAR 1							3.0	16.5		
MAR 2					6.2		0.7			
MAR 3	8.6	2.1		1.2	6.8				0.5	
MAR 4	3.1		3.8		3.9					
MAR 5			1.0	1.2	2.4					11.3
MAR 6						5.3	2.4			3.5
MAR 7		0.2				5.5	1.6		7.0	1.8
MAR 8	2.8	0.2	1.3	0.9			1.3	38.0	11.6	
MAR 9			0.4		3.1			0.9	2.1	4.3
MAR 10		2.1			2.8	8.3	1.2	2.7		1.8
MAR 11	1.3	2.6		2.3	1.3	20.6			8.1	3.5
MAR 12	4.1	7.1	7.2	1.9		8.4	2.0	23.1	3.8	2.4
MAR 13		14.8	2.7	2.8		1.9	6.6			6.4
MAR 14		0.4			15.9	3.1	3.5		3.4	2.9
MAR 15	5.8	3.5			11.2	4.5	23.4	2.7	1.2	18.3
MAR 16	2.6			0.5	24.9	15.4	2.9	4.4	2.5	12.0
MAR 17				4.2	2.9	12.3		3.5		7.9
MAR 18	0.3	0.7	11.3	13.4		7.0		1.7		4.5
MAR 19		0.4	1.0	2.7	6.6		9.3	22.7		
MAR 20			4.4		3.9	2.8	6.4			9.3
MAR 21	1.4	4.4	2.3	2.4	4.4		16.3			2.8
MAR 22	5.0	0.5	3.5	4.3	3.1	42.2	5.9	1.1	5.9	
MAR 23		2.3	2.7	3.5			16.4		1.3	3.1
MAR 24	28.1	18.2	1.4	1.4		4.9		0.6	0.9	18.9
MAR 25	1.8	5.0	7.9	3.2						4.5
MAR 26		21.3	1.4	5.3	1.4		2.3	1.0	2.6	4.2
MAR 27	5.7	3.4	6.1	8.5	8.6	1.4		2.2	0.5	4.3
MAR 28		0.2	5.8	0.4	3.3				7.0	11.3
MAR 29				1.3		11.9		2.1		7.0
MAR 30	2.0		1.5			2.2	4.0	10.3	1.2	
MAR 31	1.9		7.4		13.8	6.4	2.2		1.9	
APR 1	0.6	0.4	6.2					0.6	0.6	6.4
APR 2	0.3	0.8	0.8			6.1		3.1	0.6	
APR 3	0.8		2.1	3.1	0.8	2.5				0.6
APR 4	1.3	0.3				2.3			1.6	9.1
APR 5	0.7		1.4		0.8	20.3		1.9		
APR 6	0.3		0.8	1.5		4.9		1.6		8.8
APR 7				33.7		0.4				
APR 8				3.5		0.2				
APR 9			0.4	3.3						
APR 10			0.3	1.9						
APR 13				1.0						
TOTSEAS	78.5	92.6	88.7	113.9	134.1	200.9	111.5	141.9	64.2	183.2

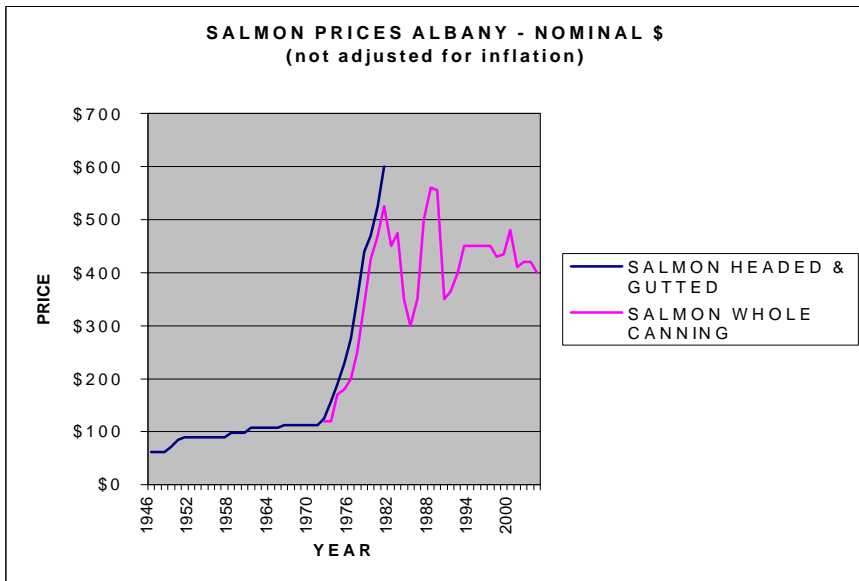
Appendix 6E DAILY SALMON CATCHES 1990-1999 (tonnes whole)

YEAR	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
FEB 3	1.5									
FEB 6	3.3									
FEB 10							0.6			
FEB 13					0.6					
FEB 17			1.2						0.3	
FEB 21					0.3					
FEB 22	0.6				3.5					
FEB 24				7.4						
FEB 25				10.9			0.8			
FEB 26							0.7			
FEB 27	0.6		0.5							
FEB 28			12.3				1.7			
FEB 29			3.0				6.1			
MAR 1							5.2			
MAR 2		2.4	0.7				7.0			
MAR 3										
MAR 4		0.4		1.0	0.5	2.5			0.7	
MAR 5		0.2		0.8		1.1	6.9			
MAR 6			2.4	7.5	0.9	3.3				
MAR 7								6.6		
MAR 8		1.0	4.2	5.8	27.1	5.1				
MAR 9			0.5		0.6		2.8			
MAR 10		7.8	0.9	4.0	12.9	6.2				4.4
MAR 11			3.2	1.6		6.0				
MAR 12		0.4	1.1			1.7			16.7	
MAR 13	1.9	0.9			0.6	3.8		0.3	5.1	
MAR 14	0.3	4.6			3.0	2.8	6.2	1.4	5.7	
MAR 15	2.6		13.0		6.5	4.7	0.4		57.1	
MAR 16	2.0	3.2		1.6	3.0	1.2	1.1	1.5		1.1
MAR 17						3.0	3.4	6.3		1.6
MAR 18					7.3			2.7		1.9
MAR 19	5.5			12.0	8.8	17.1	3.4		1.0	3.7
MAR 20					5.0	3.3	15.1	0.6		
MAR 21				1.7		5.1	1.7			
MAR 22					50.3	0.9	3.1	2.3		5.8
MAR 23	2.6	7.4		0.8			2.4	11.4	1.5	
MAR 24			3.2		7.1	1.5		1.0		
MAR 25	3.0	0.6		1.4	15.6	20.4	3.6	14.7	8.6	2.0
MAR 26	1.4				2.1	0.7	1.6			8.3
MAR 27	1.2	1.3		0.7	15.1	5.3	2.8			6.3
MAR 28					3.9	1.3	10.4			2.6
MAR 29	0.3		2.2	13.3				6.1	1.9	9.6
MAR 30	9.2	10.5	5.1		23.1	1.1	11.0		1.1	
MAR 31	1.3		1.4		9.1	1.0	11.3	2.1		
APR 1	0.7			11.0	17.2	0.6	1.2		6.7	
APR 2				1.1	8.6			5.0	1.1	
APR 3		3.8		5.3			1.6			
APR 4		1.8		0.7	2.0			1.0	0.3	
APR 5	0.3	0.6		0.7		2.8				
APR 6										
APR 7	1.3									
APR 8	0.7						2.8			
APR 14				0.4						
TOTSEAS	40.5	47.1	54.9	89.6	234.4	102.7	114.8	63.2	107.9	47.4

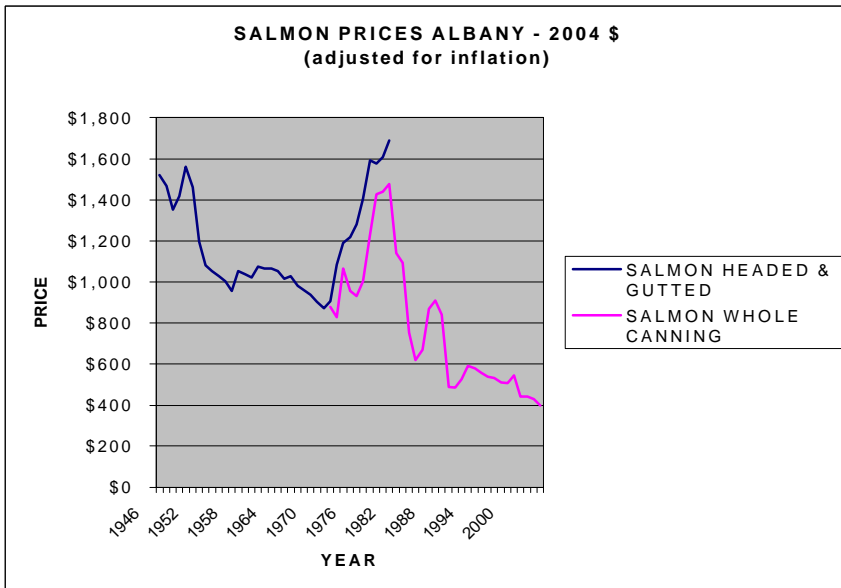
Appendix 6F DAILY SALMON CATCHES 2000-2004 (tonnes whole)

YEAR	2000	2001	2002	2003	2004
FEB 10	1.0				
FEB 20			0.8		
FEB 24			1.8		
FEB 29	1.1				
MAR 1	1.2		2.3		
MAR 2			7.0		
MAR 3	0.4		3.3		
MAR 4			2.5		
MAR 5	0.6				
MAR 6	1.8		0.4	0.2	
MAR 7					
MAR 8	3.8				
MAR 9			2.2		
MAR 10			1.4		1.4
MAR 11			1.3		
MAR 12	6.6		0.6		
MAR 13			2.8		
MAR 14	3.4				1.1
MAR 15			0.9	0.4	
MAR 16		1.3			
MAR 17		2.4			
MAR 18			0.6		0.6
MAR 19	3.3		0.3		
MAR 20	1.4		3.8		
MAR 21			8.9	2.5	
MAR 22		1.0	1.0		
MAR 23	0.4		1.0	1.4	
MAR 24			0.8	1.5	0.9
MAR 25		1.9			
MAR 26		2.0		0.5	3.0
MAR 27		1.8	2.8	0.3	6.1
MAR 28		4.6	7.2	1.2	
MAR 29		3.6		6.2	
MAR 30					
MAR 31		5.4		0.5	
APR 1	0.5		0.8		2.9
APR 2	0.7				
APR 3		5.0		0.1	1.5
APR 4	2.3	15.7	3.3		3.9
APR 5	3.3			0.4	
APR 6	0.7		1.5		
APR 7	5.1	1.8			
APR 8	1.4	1.7			
APR 9	1.9	13.0			
APR 10		1.0			
APR 11		2.1			
APR 12		0.6	0.4		
APR 13		0.6			
APR 14	0.9				
TOTSEAS	37.1	70.4	59.6	15.1	21.3

Appendix 9A SALMON PRICES – NOT ADJUSTED FOR INFLATION



Appendix 9B SALMON PRICES – ADJUSTED FOR INFLATION



Appendix 10 SALMON SEASON SUMMARIES

YEAR	TEAM	BOATS	VEHICLES	TRACTORS	SALMON CATCH tonnes whole
1946	Les,Ron,Norm,Cyril	Launch, 3.8m	Lease lend, Ice truck		25
1947	Les,Ron,Eric,Norm,Cyril	Launch, 3.8m	Lease lend, Ice truck		65
1948	Les,Ron,Eric,Norm,Cyril, Ernie & Jack Coyne	Launch, 3.8m	Lease lend, Ice truck, Forby		60
1949	Les,Ron,Norm,Cyril,Ernie & Jack Coyne	Launch, 4.6m,3.8m	Lease lend, Ice truck, Forby		23.6
1950	Les,Ron,Norm,Cyril,Ernie & Jack Coyne	Launch, 4.6m,3.8m	Lease lend, Ice truck, Forby		20.4
1951	Les,Ron,E&J Coyne, Cleve Johns, Farmer, Rodd*	Launch, 4.6m,3.8m	Lease lend, Ice truck, Forby		66.4
1952	Les,Ron,E&J Coyne, Cleve Johns, Farmer, Rodd*	4.6m,3.8m	Lease lend, Buff,Forby		47.9
1953	Les,Ron,E&J Coyne, Cleve Johns, Farmer, Rodd*	4.6m,3.8m	Lease lend, Buff,Forby		42.9
1954	Les,Ron,E&J Coyne, Cleve Johns, Farmer, Rodd*	4.6m,3.8m	Lease lend, Buff,Green,Forby		139.5
1955	Les,Ron,E&J Coyne, Cleve Johns, Farmer, Rodd*	4.6m,3.8m	Buff,Green,Forby		46.5
1956	Les,Ron,E&J Coyne, Cleve Johns, Farmer, Rodd*	4.6m,3.8m	Buff,Green,Forby		28.6
1957	Les,Ron,E&J Coyne, Cleve Johns, Farmer, Rodd*	4.6m,3.8m	Buff,Green,Forby		67.0
1958	Les,Ron,E&J Coyne, Cleve Johns, Farmer, Rodd*	4.6m,3.8m	Buff,Green,Forby		66.9
1959	Les,Ron,John Cleary,Ernie Coyne,Cleve Johns	4.6m,3.8m	Buff,Green,Forby		73.6
1960	Les,Ron,John Cleary,Back,Inman,G Bowden	4.6m,3.8m	Buff,Green,Forby		59.2
1961	Les,Ron,Cleary, Jack Coyne ,Cleve Johns,Voss	4.6m,3.8m	Buff,Green,Forby		23.3
1962	Les,Ron,Cleary, Cleve & Peter Johns, Voss,Stack	4.6m,3.8m	Buff,Green,Forby		80.7
1963	Les,Ron,Cleary, Bowden,J&H Scheepers,Eades	4.6m,3.8m	Buff,Green,Forby		18.3
1964	Les,Ron,Cleary,C&P Johns,Hansen,Voss	4.6m,3.8m	Buff,Green,Forby		43.9
1965	Ron,Greg,Cleary, Gaebler,Johns,	4.6m	Buff,Green,Forby		80.2

1966	Richards,Finlay Ron,Greg,Cleary, Gaebler,Crabtree, Ken Gilchrist	4.6m	Buff,Green,Forby	95.4
1967	Ron,Ron,Cleary, Johns,Hoddinott,K-K-M- G Gilchrist	4.6m	Green,Forby	170.8
1968	Ron,Ron,Cleary, Gaebler, Frost,K Gilchrist,Tompkins	4.6m	Green,Forby	120.3
1969	Ron,Ron,Greg,J-D-D Cleary,Frost,K&G Gilchrist	4.6m	Green,Forby	41.4
1970	Ron,Ron,Greg,J-D-D Cleary,Frost,G Bowden	4.6m	Green,Forby, Landrover	61.7
1971	Ron,Ron,Greg, SchereLL,Creighton,Phillip s,Davis	Jet,4.6m	Green,Forby, Landrover	29.0
1972	Ron,Ron,Greg,Frost,Phill ips,Davis, Howells	Jet,4.6m	Green,Forby,Stout,Lan drover	82.5
1973	Ron,Ron,Greg,Frost,B Creighton,R Davis	Jet,4.6m	Green,Stout, Landrover	Fordson 29.9
1974	Ron,Ron,Greg,Frost,Les Wignell,Roley Davis	Jet,4.1m alum	Green,Stout, Landrover	Fordson 21.7
1975	Ron,Ron,Greg,Frost,Rob ert Hall,Roley Davis	Jet,4.1m alum	Green,Stout, Landrover	Fordson 61.0
1976	Ron,Ron,Greg,Frost,Les Wignell,Roley Davis	Jet,4.1m alum	Red,Stout, Landrover	Fordson 29.7
1977	Ron,Ron,Greg,Frost,Geo rge Gilchrist, Roley Davis	Jet,4.1m alum	Red,Dyna,Stout, Landrover	Fordson 73.8
1978	Ron,Ron,Greg,Frost,Geo rge Gilchrist, Roley Davis	Jet,4.1m alum	Red,Dyna,Stout, Landrover	Fordson 15.0
1979	Ron,Ron,Greg,Kevin,Fro st,George Gilchrist,Davis	Jet,4.1m alum	Red,Dyna, 2 Landrovers	Fordson 114.2
1980	Ron,Ron,Greg,Frost,Geo rge Gilchrist, Harry Casey	Jet,4.1m alum	Red,Dyna, 2 Landrovers	Fordson 78.5
1981	Ron,Ron,Greg,Kevin,Fro st,George Gilchrist,N Casey	Jet,4.2m,4.1m	Red,Dyna, 3 Landrovers	Fordson 92.6
1982	Ron,Ron,Greg,Frost,Geo rge Gilchrist, Colin Tindale	Jet,4.2m,4.1m	Red,Dyna,Hilux, 2 Landrovers	Fordson, Inter 88.8
1983	Ron,Ron,Greg,Frost,G Gilchrist,Colin Tindale	Jet,4.2m,4.1m	Red,Dyna,Hilux, 2 Landrovers	Fordson, Inter 113.9
1984	Ron,Ron,Greg,Frost,G Gilchrist,Colin Tindale	Jet,4.2m,4.1m	Red,Canter,Hilux,2 Landrovers	Fordson, Inter 134.1
1985	Ron,Ron,Greg,Frost,G Gilchrist, Tindale,Kane	Jet,4.2m,4.1m	Red,Canter,Hilux,2 Landrovers	Fordson, Inter 200.9
1986	Ron,Ron,Greg,Frost,G Gilchrist,Colin Tindale	Jet,4.2m,4.1m	Red,Canter,Hilux,2 Landrovers	Fordson, Inter 111.5
1987	Ron,Ron,Greg,Frost,G Gilchrist,Colin Tindale	Jet,4.2m,4.1m	Red,Canter,Hilux,2 Landrovers	Fordson, Inter 141.9
1988	Ron,Ron,Greg,Frost,G Gilchrist,Colin Tindale	Jet,4.2m,4.1m	Red,Canter,Hilux	Fordson, Inter 64.2
1989	Ron,Ron,Greg,Frost,G Gilchrist,Colin Tindale	Jet,4.2m,4.1m	Red,Canter,Hilux	Fordson, Inter 183.2

1990	Ron,Ron,Greg,Frost,G Gilchrist,Clint Willis	Jet,4.2m,4.1m	Red,Landcruiser, Hilux	Fordson, Inter, Nuffield	40.5
1991	Ron,Ron,Greg,Frost,G Gilchrist,Kevin Willis	Jet,4.2m,4.1m	Red,Landcruiser, Hilux	Fordson, Inter, Nuffield	47.1
1992	Ron,Ron,Greg,Frost,Gilc hrist,McGuire,D Phillips	4.6&4.2m jets,4.1m	Red,Landcruiser, Hilux	Fordson, Inter, Nuffield	54.9
1993	Ron,Ron,Greg,Frost,Gilc hrist,D Phillips,Larsen	4.6&4.2m jets,4.1m	Inter,Landcruiser,Hilux	Fordson, Inter, Nuffield	89.7
1994	Ron,Ron,Greg,Frost,Row ney,N Casey, Hockey, Gilchrist	4.6&4.2m jets,4.1m	Inter,Landcruiser,Hilux	Fordson, Inter, Nuffield	234.4
1995	Ron,Ron,Greg,Frost,Utb er,N Casey, Collingwood,Davis	4.6&4.2m jets,4.1m	Inter,Landcruiser,Hilux	Fdsn,Int,Nuf, MF	102.7
1996	Ron,Ron,Greg,Frost,Scot t,N Casey, Gilchrist	4.6&4.2m jets,4.1m	Inter,Landcruiser,Hilux	Fdsn,Int,Nuf, MF	114.8
1997	Ron,Greg,Frost, Gilchrist,N Casey, Tindale,McGuire	4.6&4.2m jets,4.1m	Inter,Landcruiser	Fdsn,Nuf,MF ,Chamberln	63.2
1998	Ron,Greg,Frost, Brad Tindale,N Casey,Gilchrist,McGuire	4.6&4.2m jets,4.1m	Inter,Landcruiser	Fdsn,Nuf,MF ,Chamberln	107.9
1999	Ron,Greg,Frost, Brad Tindale, Gilchrist, Brian	4.6&4.2m jets,4.1m	Inter,Landcruiser	Fdsn,Nuf,MF ,Chamberln	47.4
2000	Ron,Greg,Frost, Brad Tindale, Brian,Phil Shephard	4.6&4.2m jets,4.1m	Inter,Landcruiser	Fdsn,Nuf,MF ,Chamberln	37.0
2001	Ron,Greg,Frost, Brad Tindale, Brian,Field	4.6&4.2m jets,4.1m	Inter,Landcruiser	Nuf,MF, Chamberln	70.4
2002	Ron,Greg,Frost, Brad Tindale, Gilchrist, Andrew	4.6&4.2m jets,4.1m	Inter,Landcruiser	Nuf,MF, Chamberln	59.6
2003	Ron,Greg,Frost, Brad Tindale, Gilchrist,Jamie Frost,Phil Shephard	4.6&4.2m jets,4.1m	Inter,Hilux	Nuf,MF, Chamberln	15.1
2004	Ron,Greg,Frost, Jamie Frost, Patricia,Brian, Andrew,Don Philipps, Alan Murdoch	4.6&4.2m jets,4.1m	Inter,Hilux	Nuf,MF, Chamberln	21.2

CAMPS:

1946-1955 in tents at south end of Reef Beach

1956 Cape Riche, Bremer Bay

1957-1963 in house at House Beach

1964-1972 in shack on sand hill, half way along Reef Beach

1973-2004 at current location, half way along Reef Beach

OTHER FISHERMEN:

Until 1963 fished all beaches, in 1964 Proclaimed Fishing Zones introduced and Trigelow unavailable.

From 1976 Limited Entry Fisheries introduced and House Beach and Peppermint out of bounds.

Hopetoun: 2 teams until 1952.

Point Charles: Collett 1966-71.

Trigelow: Cullinane 1954-55, Bentley 1960-1997, Colin Kennedy 1998+.

House Beach: Kevin Kennedy 1982-92, Craig Kennedy 1993-94, 1996+.

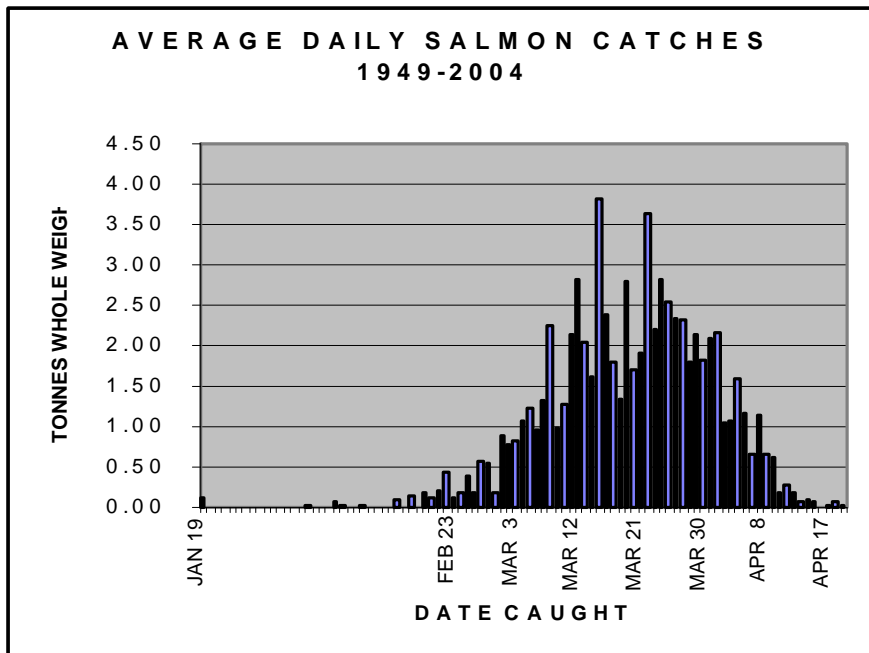
Reef Beach: Cullinane 1956-66.

Drages Beach: Colin Kennedy 1982-1997.

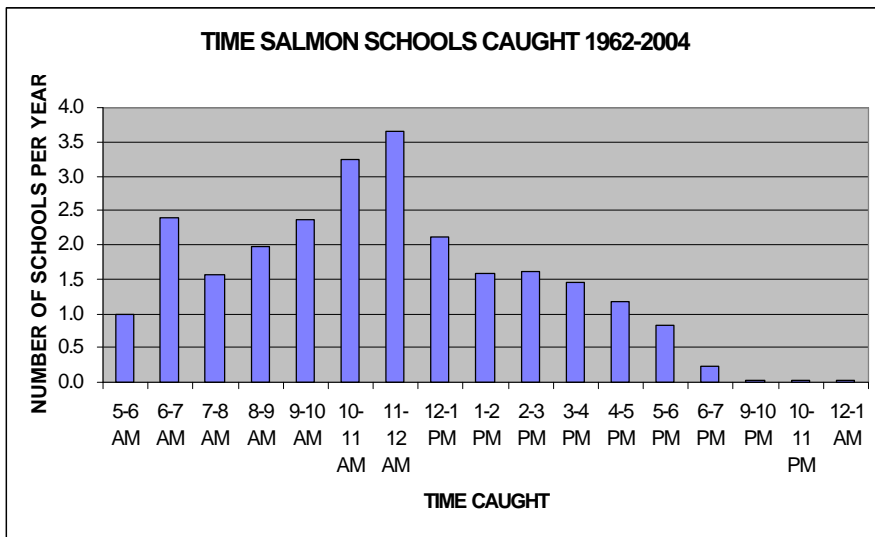
Peppermint: Cullinane 1949.

Bremer Bay: Chipperfield 1948-49, Shenfield 1950, Cullinane 1951-53, Morris 1953-85, Wilson 1986-1996, vacant 1997-.

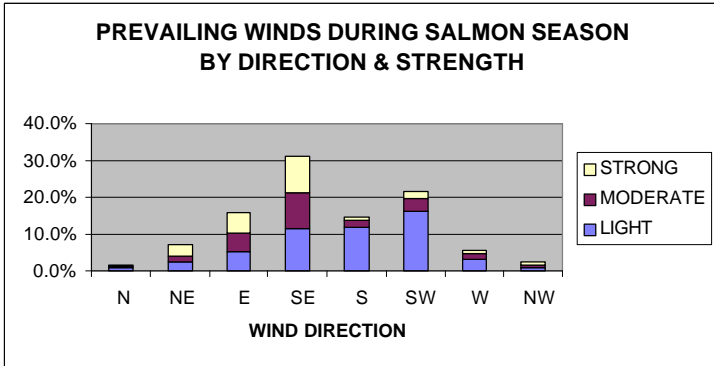
Appendix 11 DAILY SALMON CATCHES



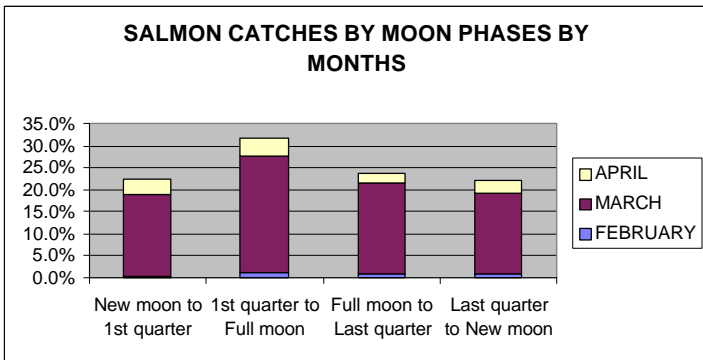
Appendix 12 TIME CAUGHT



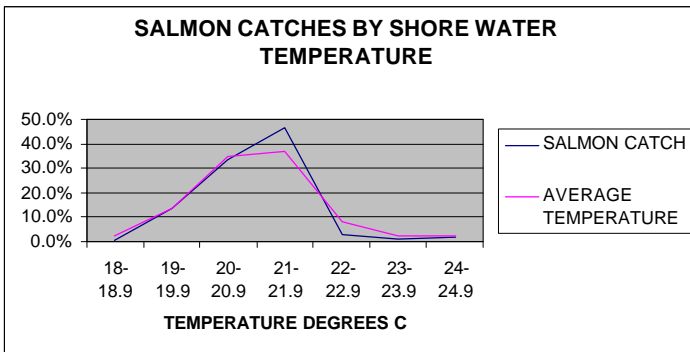
Appendix 13 PREVAILING WINDS DURING SALMON SEASON 1962-2003



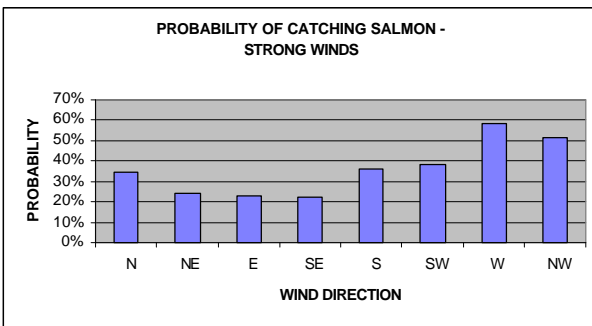
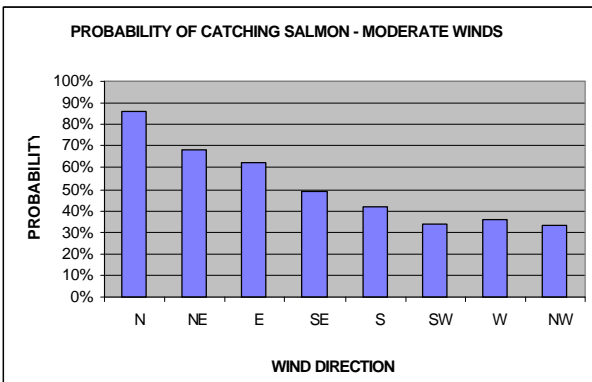
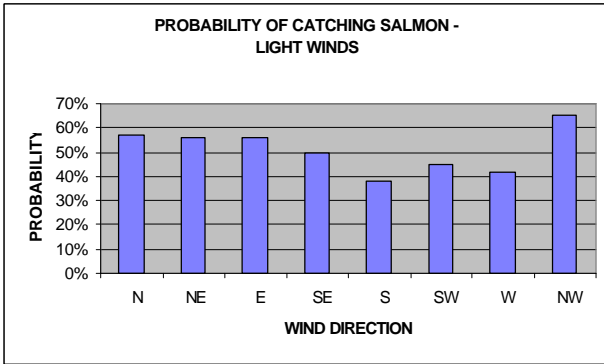
Appendix 14 SALMON CATCHES BY MOON PHASES 1962-2003



Appendix 15 CATCHES BY WATER TEMPERATURE 1965-66, 1993-2003



Appendix 16 SALMON CATCHES BY WIND DIRECTION & STRENGTH



Appendix 17 HEBERLE PALLINUP CATCHES in tonnes

(data from Lenanton, 1984)

YEAR	Black bream	Mullet	Salmon trout	Yellow eye mullet	Other	Total	Days fished
1945	7.67	0.31	0	0	0	7.98	48
1946	2.56	0	0	0	0	2.56	20
1947	5.88	8.77	0.24	0	0	14.89	50
1948	2.48	10.86	0.89	2.98	0.30	17.51	56
1949	0.78	9.64	0	3.01	0.26	13.69	49
1950	3.28	2.16	0	0.80	0.21	6.45	18
1951	3.23	5.02	0.05	2.09	0.30	10.69	34
1952	0	0	0	0	0	0	0
1953	0	0	0	0	0	0	0
1954	0.52	9.81	0.35	0	0.29	10.97	56
TOTAL	26.40	46.57	1.53	8.88	1.36	84.74	331
%	31%	55%	2%	10%	2%		

Comments:

Partial mortality 1944. Bar broke July 1945. All species too small 1946, except black bream. Bar broke 1949. Most fish too small 1950. Low water levels late 1951. Total mortality mid 1952. Floods 1953 prevented fishing. Average daily catch 0.26t.