



The History Of Fishing In The Tuggerah Lakes And Surrounding Areas

As told by Arthur George Clouten

Edited by Anthony Scott

CSIRO Land and Water
Canberra ACT 2601
Technical Report 1/98 December 1998



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Acknowledgements

I would like to thank **Arthur Clouten** for having the foresight to record in his diaries and notebooks such a wealth of information about fishing in the Tuggerah Lakes over the last 80 years. I would also like to thank him for sharing this information with us all.

I would also like to thank **Alan Genders** for reviewing the draft. His comments and corrections greatly improved the text.

Anthony Scott

Disclaimer

In this report Arthur Clouten provides a description of fishing in the Tuggerah Lakes since the 1920s, as he remembers it. Other fishermen might have different recollections to those expressed by Arthur.

The editor undertook the role of compiling the information provided by Arthur into a cohesive text without altering the content or meaning. The views expressed by Arthur are not necessarily those of the editor or of CSIRO Land & Water

Abstract

This report provides an oral history of fishing in the estuarine waters along the NSW Central and mid-North Coasts, and particularly in the Tuggerah Lakes, as told by a professional fisherman, Arthur Clouten. Arthur started fishing in the 1920s in the Tuggerah Lakes, and over the following years also fished in Lake Macquarie, the Myall Lakes, Wallis Lake and the Manning River. He provides information on the types of fish caught, the quantities, the fishing techniques used, and the difficulties encountered with the changing government regulations imposed on the professional fishermen. The information was obtained from diaries Arthur had written over the last 40 years and also from a series of interviews with Arthur and his grandson, Michael.

The report forms one part of a larger study on the ecological history of the Tuggerah Lakes.

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Introduction

The Tuggerah Lakes are on the Central Coast of NSW and consist of three interconnected coastal lagoons, Lake Munmorah, Budgewoi Lake and Tuggerah Lake (see Figure 1). In recent years there has been much debate about the declining health of these lakes and considerable sums of money have been spent in an attempt at restoration.

However, one of the problems facing the managers of the Tuggerah Lakes, is that there is very little scientific data available that provides an indication of what the lakes were like in their 'natural' state.

For this reason, in 1998 a study was commenced to investigate the ecological history of the Tuggerah Lakes. As part of this study, a group of local residents who have had a long association with the Lakes were interviewed to obtain anecdotal information about the ecology of the lakes earlier this century, when the impact of European settlement was still minimal.

One of the key people interviewed was Arthur Clouten, a retired professional fisherman. Arthur started fishing in the Tuggerah Lakes during the 1920s and over the following years also fished in Lake Macquarie, the Myall Lakes, Wallis Lake and the Manning River.

Arthur had the foresight to record in diaries and notebooks a great deal of information about his life as a fisherman, including the types of fish caught, the quantities of fish, the fishing techniques used, and the difficulties encountered with the changing government regulations imposed upon the professional fishermen. He has also kept copies of letters, newspaper articles and some sketch maps of the lakes. Further information was collected during the interviews which were held in May 1998. Arthur's grandson, Micheal Clouten, who started as a professional fisherman when Arthur retired in 1981, also attended these interviews.

A draft of this report was proof read by Arthur in late 1998 and minor corrections and additions were included.

This report not only tells the story of Arthur Clouten, and in particular his recollections of the fishing industry at the Tuggerah Lakes, but also contains valuable information about the ecology of these lakes' over the last 80 years.



Arthur Clouten was a professional fisherman on the Tuggerah Lakes from the 1920s until 1981 when he retired. Before him, his father and grandfather were also fishermen.

Part A: Diaries and letters

(This information has been obtained from a series of diaries and letters that Arthur wrote, mostly in the late 1950s and early 1960s, but also with some additional information written in the 1980s and early 1990s)

1. Arthur Clouten's fishing career

The early years of my life

I came into the world on the 17th July 1911, born Arthur George Clouten, eldest son of George William Clouten, at East Wyong now known as Tacoma. My father was a professional fisherman, and the first thing I remember is living at Tacoma in a house belonging to an uncle of mine, George Bendeich.

At the age of 6 years I started school at Toronto, my father having shifted there when fish were scarce in Tuggerah Lakes. Even in those days fishermen had to go to various lakes and rivers when fish became scarce at Tuggerah Lakes (during winter months all estuaries have the same problem). Around March/April each year approximately 85% of mullet leave the lakes and rivers for the sea to spawn. In the period April/May the bream and other fish do the same so few fish are found until mid September when small fish have grown and return. The fish catch improves until the next cycle of seasonal changes and spawning periods.

At approximately 8 years old (1919), we returned to Tuggerah Lakes. Unable to get a house to rent, for a time we lived with a school teacher, Mrs Platt, in a house long since demolished, half a mile north of Rocky Point, known by fishermen as 'Millers'. Whilst living there, fish were at times quite scarce. My father went several weeks without getting a reasonable catch. The legal length for mullet was 12 inches and the net used had a 3 inch mesh and was 800 yards long. A third of this was allowed to be 2 $\frac{3}{4}$ inch mesh. When he did get a decent catch his 20 foot boat sank about 1 mile off shore from where Wyongah township now stands. Mr Rowe who owned an orange orchard there, heard his calls for help and went out in his launch to bring him and the boat ashore. This occurred at 3 o'clock in the morning in July 1919.

Shortly after this we shifted to a cottage at Tacoma owned by Mrs Reid. This house later became part of the general store at Tacoma. In 1920 my father was able to buy a block of land and a shack at 15 Wolesley Ave, Tacoma for 50 pounds, formerly owned by a Mr Ned Newman. The shack had 2 rooms, each 12 by 12 feet, and was built out of Ti-Tree poles, with boards and pieces of tin to keep out the weather. A large fire place (6 by 4ft) at the southern end served as an open fire for cooking. As mine was a large family we had to cut a few more poles and built a skillion at the rear with an iron roof and 'bag' sides. A few boards on the ground completed the floor. To enable us to be fed we made a garden and had several hives of bees.

We used to walk to school at Wyong, 3 $\frac{1}{2}$ miles each way and carry home groceries, meat etc. In the winter months payment for these usually got behind but would be made up during summer. At approximately 12 years of age we started school at Tacoma, which was behind the houses at South Tacoma.

Starting to fish in 1924

At the age of 13 years, during 1924, my father bought an old boat from Mr B Williams for 3 pounds, and I got some net from the fish agents, as well as a fishing licence and boating licence for 5 shillings each. I commenced fishing around the nearby bays, rowing and sailing with a sail made from bags, when suitable winds prevailed. I used meshing nets for catching mullet.

In those days it was possible to make a living catching mullet, luderick and a few flathead for about 9 months of the year but very few could be caught during July, August and early September.

The Tuggerah Lakes consists of three lakes. The main lake (now called Tuggerah Lake) was very weedy on the western side but the eastern side had clear sand flats, where prawning was done. Also sand whiting and bream could be caught in reasonable quantities for 9 months of the year. These would be caught by hauling nets.

The middle lake (now known as Budgewoi Lake), was a very weedy lake where luderick and mullet were available during the same months as the main lake. The top lake (known as Lake Munmorah), was clear of weed and being much deeper was mainly fished during the winter months, for bream, tarwhine and mullet. Very little fishing was done in this lake during the hot weather as it was hard to get to and fishermen usually had to dig a channel to get boats in, but it was a good standby during winter months when fish leave the other shallow lakes for the deeper water of the rivers or the tidal waters of the Entrance.

When I was 15 my grandfather asked my father if I could go and help his youngest son (Herb) catch prawns in Lake Macquarie. By this stage my grandfather had moved from Tacoma where he used to build boats, to Stony Creek near Toronto. Herb was my uncle, yet only 5 months older than me. In the spring of that year (1926) until Christmas we would catch and cook prawns in Lake Macquarie and sell them from Coal Point to Toronto and around Blackalls. This was by hawking from house to house at 1 shilling per quart measure.

After Christmas I returned home and used to fish with my father. In 1927 we got a horse and cart from Mr Bill Noakes for £3. A fish hawking business was started by us but we had to buy fish when unable to catch them ourselves. We used to go to Dooralong on Mondays, Ourimbah and Ourimbah Creek on Tuesdays, Yarralong on Wednesday, around Wyong on Thursday and Ourimbah & Lisarow on Friday.

In 1927-28 fish was very cheap and fishermen's earnings would only range between £100 and £150 per year.

In winter time when unable to catch fish, we milked cows on a dairy at Rocky Point or cut swamp oak for fire wood, selling most to Millfred Jones Bakery which was near the Church of England, Wyong. After snigging logs up to where Mrs Spiers, the fish carter and her sons lived, we would cut up the required length with a 6 ft cross cut saw; Alex Spiers one end, myself the other. For a cart load we would get 12 shillings, 6 shillings going to Mrs. Spiers for the use of horses and a cart, and we would have 3 shillings each.

Joining a hauling crew in 1929-30

Conditions got bad as the Depression deepened and my father shifted to live at Ourimbah selling fish, and later he got relief work. Fish were few and far between during this period. I stayed at Tacoma and bought an engine for £35 on time payment. However, I was unable to keep up the payments of 10 shillings per week and the engine was repossessed. So I joined a crew of 5 on a hauling net which was winched by hand, 2 men to each winch. In those days nets were much larger although the regulation was about the same as now (*written in 1961*), but with very few people living along the lakes the fishermen were able to use as much net as they wanted to.

During 1929-1930 earnings were very irregular. I was on a one-eighth share of the catch and for seven weeks before Christmas 1930, my highest weekly wage was only 15 shillings. However, on the last week before Christmas we went up to the top lake and had 2 hauls, the first catching 14 cases of bream (a case is approx 60 lbs) and the second achieved 6 cases, and I received £4 for the Christmas pay. When the winter set in and fish weren't available, I received food relief of 6 shillings 2 pence per week.

Prawning and fishing in the early 1930s

In 1931 a family from Sydney came to Tuggerah Lakes hoping to make a living from fishing during the depression. They bought a boat and net but soon realised that there was more to it than they had first thought, so I joined in to show them. We had 2 seasons together, hauling for fish and prawning, and caught a considerable quantity of prawns during the summer months. We had rigged a prawn net for prawn hauling which was 200 yards long and a mesh size of $1\frac{1}{8}$ inch tanned down to 1 inch, the legal length for prawns being 3 inches. One night in November 1931 we caught 84 cases of school prawns (60 lbs per case) and for the overall week, 125 cases, for which we were paid 37 pounds. This amounted to £9 and 6 shillings each person. That season would be the best for quite a few years and was due to the record floods in 1928-29 which put a big entrance from the lake into the sea. Fishing was also good except for the three cold months. In 1933 the family returned to their former business in Sydney.

Starting out on my own in 1933

I repaired an old launch and with my savings payed a deposit of £10 on a 4 hp 2 stroke Vinco engine (total price being £50 at 10 shillings per week). With some meshing net from an agent of the Sydney fish market I started fishing. For the first time in my life I had my own launch and net. The launch was 16 ft 9 inches long and 5 ft 3 inches across the beam. I started fishing by myself, meshing mullet in the summer and prawning in the spring, but in the three winter months I would be lucky to catch one apple dump case of fish (which holds 40 lbs) in two days.

In conjunction with Ernest Simons and R Byles jnr I started to rig a hauling net, this was in September 1933. Mr Andrew Gilkinson joined in so we were then able to rig a net 1500 yards long for a cost of about £30 each.

Due to the Entrance being blocked, bream were difficult to find and prawns were scarce, but blackfish, or luderick as they are now called, appeared abundantly. They were found in the weeds but were not worth a lot. We had several good hauls, but in May 1934, after doing a haul for only 2 flathead, we realized that fish would be very scarce during the coming winter.

Fishing at the Myall Lakes in the 1930s

We dried our nets and on 8th May 1934 loaded our launches with a few belongings and set out for The Entrance to go to Port Stephens - this had been done for many years by fisherman from Tuggerah Lakes. Andrew Gilkinson decided not to come until we'd established better hauls. After getting petrol for our launches we went down to the sand bar at the Entrance but it was too shallow to float our launches out which needed a foot deep of water. So we went around to Long Jetty to get a lorry to transport our launches to Chinamans Bay, now called Toowoan Bay, a distance of 2 miles. Cecil Spiers, who had shifted out to the sea from lake fishing, knew a chap named Sullivan who owned a lorry, and after getting our launches over, Cecil Spiers who had his launch there, joined us and next morning we set out for Newcastle in our three launches (Cecil Spiers' was 19 ft. long, 6 ft beam, 3 h.p. Acme 4 stroke engine, Ernest Simons' was 17 ft by 6 ft and 4 h.p. 2 stroke Vinco engine, my launch was 16ft 9 inches by 5 ft 3 inches, 4 h.p. Vinco engine). We reached Newcastle 5½ hours later having decided to moor at Civic Station.

The following morning we left for Port Stephens and 6 hours later arrived at 'Windy Wopper' which is downstream from Tea Gardens. At Windy Wopper we met two other fishermen who had left Tuggerah Lakes previously. They were Joker Smith and Bill Denniss. After having dinner together we went upstream to Tea Gardens to load up with fuel and provisions and set out for Tambo lake, the first of several lakes. Arriving late afternoon we got the nets ready but had to stop when a storm blew up rendering it impossible to go out that night.

Next day being fine we moved to a place known as Two Mile Lake. While boiling the billy we saw the 'Store Boat' coming with a man on deck waving to us to come and pick him up. Upon reaching the channel we recognised him as Arthur Duncan better known as 'Diver' Duncan. He had left Tuggerah Lakes a year or two earlier. The store boat was once a passenger ferry at Tuggerah Lakes and had been known as the 'Dreadnought'. It had been built and owned by Bill Hughes of Wyong.

That night we commenced fishing and got a few cases of mullet which were sold at Newcastle direct to fish shops, the price paid to us being 8 shillings per 60 lb case. Our next haul was 2 cases of bream at 28 shillings per case, but we had trouble with the net getting stuck in the soft mud. So we went up past Sheep Island Lake to a sand flat and after dark ran out the net and hauled it in the next morning for 6 cases of bream. We then went to Mayer Flat where there was another sand flat and filled a launch with bream. These were expected to fetch a reasonable price but when unable to sell at Newcastle they went through Sydney markets. After expenses only £4 and 15 shillings was received for the lot, this was largely on account of the catch having a 'weedy' flavour.

Moving to Wallis Lake in 1934

In early July 1934 we decided to move up to Wallis Lake. 'Diver' Duncan knew a carrier at Bungwahl named Bramble, who carted our launches over to Wallis Lake. On the following day we met Wally Nicholson who also had left Tuggerah Lakes and was living in a house opposite Regatta Island, about 3 miles up the river from Tuncurry. He invited us up for dinner then suggested we make camp in the building on the Island then try our luck at Coomba Bay with the hauling net. Our nets had only 1 inch Sisal rope lead line which kept muddying up due to the soft bottom of the Bay, still, 2001bs of flathead were caught. The following day presented similar difficulties, but in the end we got another 400 lbs of flathead. We went over to Wally's place to see if he had any old 2 inch Coir rope and found some abandoned in the grass. Although rotten it could still be used to tie loosely along the lead line to prevent our mud problems. It was a success, and every day hauls between 300 and 800lbs were obtained, mainly flathead.

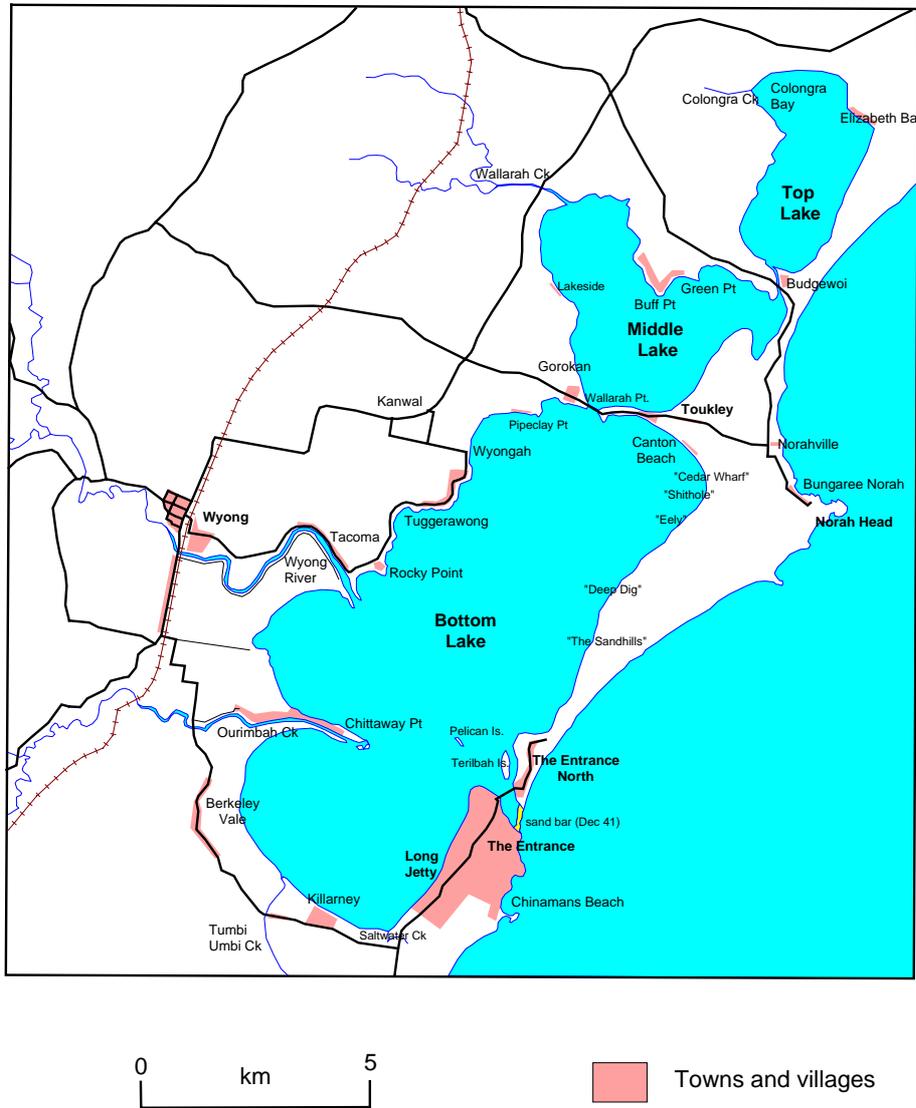
Our crew decided to rent a cottage at Forster. In the middle of September 1934 the flathead left the Regatta area to go back into the lake. But provided we kept the net inside 'the step' on the hard weedy bottom we could get in and achieve good takings of bream, luderick, leather jackets etc. This required the full crew of 5 to use the hauling net. Mid October saw Andy Gilkinson joining the operation but this made for too many of us for one net. I left, got some meshing net sent up from Tacoma which I had bagged before leaving. When it arrived I started meshing mullet, about 2500 lbs per week depending on the weather. After a few weeks R Byles Junior joined me which increased the catch. After Christmas the others, using the hauling net, started getting poor hauls so they rigged a meshing net and R. Byles went back over to help them when my brother came up from Tuggerah Lakes to help me.

My brother and I left the house we had at Forster and went camping at Dates Point near Wally Nicholson's place, meshing the lake from September until June and then the rivers. During this time I used to ride my push bike which was a "Speedwell" road racing machine from Tuncurry to Tacoma every few weeks.

Getting married in 1937

In March 1937 I got married at Wingham but continued to fish at Wallis Lake until falling mullet prices would no longer cover expenses at Sydney Markets. Early in 1939 I found it necessary to undertake relief work being done by the Public Works Department on the Tiona to Forster Road. Due to a lack of funding only 2 weeks work per month was available. In September 1939 we were shifted to the Kendall to Laurieton Rd.

Figure 1: Tuggerah Lakes in 1941



Meshing mullet in Wallis Lake in 1940

Fish prices for mullet started to improve slightly once the war started. In November 1939, I resumed fishing again and although the bountiful catches weren't making much money it was just enough to live on. At Christmas a fisherman from Forster came up to Dates Point where I was living to ask if he could join in the meshing. His name was Mick Stein and we commenced meshing in January 1940, catching up to 104 cases a week, 100 lbs a case, mainly mullet and a few flathead but prices at times were cheap. Prices started to improve and in 1940 his cousin Dave Immerton and Jacky Moran joined in.

Returning to the Tuggerah Lakes in December 1940

On the 26th December 1940 I returned to Tuggerah Lakes with my family, launch and gear and purchased a block of land from Mr A. Warner, lot 16, price £55. I was required to lodge a £10 deposit and instalments were 5 shillings per week. I started to build a home in my spare time.

My two brothers, Harold and Bruce were hauling with brother-in-law Jack Denniss, but due to the entrance channel blocking up, they had been catching very little fish, mainly large flathead (some up to 8-9 lbs), and Jack said he was leaving if fish did not improve. The first haul I had with them near Long Jetty we caught 2 cases, mainly flathead, and a second haul about 40 lbs, mainly flathead. Harold and I took them down to sell to the fish shop at The Entrance, but when we got down there, holiday visitors bought them direct from the boat in a few minutes. Returning to where we had done the haul to pack up the other boats, nets, etc., Jack said he was leaving at the end of the week.

After Jack left I went up to the top lake on the advice of an uncle, Abe Clouten. I had previously hauled there in 1929-30 at times. We had some very good hauls of bream and large tarwhine, 30 cases a haul was common. We had to carry shovels to dig the channel when going in and out.

About May 1942 rain rose the level of the lake, the water too high to use the hauling net, with the entrance channel completely blocked by sand. Bruce and I decided to spend a couple of days bike riding. We went to Tamworth, but when we got there the rain started again, so we caught the train back to Gosford and rode back to Wyong, the water was over the road to Tacoma. The next day with several other fishermen we went to The Entrance with shovels and opened up the channel. The channel had been blocked from the sea for most of the time since approximately 1936. During this time a large quantity of greasyback prawns were caught in Munmorah Lake, but were very cheap, some weeks not clearing expenses. Unlike other varieties they do not need to go to sea to spawn. It had been the first time for many years that large quantities of greasyback prawns were caught in Tuggerah Lakes. We caught several hundred cases of greasybacks from the late spring until about February, in 1941 to 1943.

Also with the lakes cut off from sea water, all weed and shell life had died leaving the lakes barren of feed except for the greasyback prawns and worms in Munmorah Lake, which the bream and tarwhine were feeding on.

At Christmas 1942 I was able to buy a second hand 1938 Chevrolet Utility and in February 1943 went up to Lake Munmorah to see if there were any prawns there, as there weren't many in the bottom lake. There were, and I caught a nice lot the first night.

Jack Denniss was again fishing and prawning with Cecil Spiers who had returned from Wallis Lake, and they said they would like to come up to Munmorah Lake but as the channel to Munmorah kept blocking up and the prawns needed to be sent on the 8am train, they would not get back to Tacoma in time to catch it. I told them to come up with me, provided they gave me their quota of petrol tickets - rationing was on. They came up and we would have a full load of prawns each morning. We used my utility to get the prawns across to Wyee station one day, and the next day to Wyong station, then pick up food etc in Wyong; - this made the petrol spin out.

Wynn of Mannering Park was also catching large quantities of greasyback prawns at another part of Munmorah Lake and so was Thomas at Elizabeth Bay. These prawns lasted in good quantity until a week before Easter 1943.

The Manning River in 1943

A week before Easter 1943 (the prawn season being finished) my brother Harold and I loaded meshing nets and a marine engine into the ute and left for Forster, but unable to get a suitable boat, went to Manning River at Cundletown. There, George Duncan and family, who had also left Tuggerah Lakes, were fishing. His two boys, Laurie and Owen, had a boat but no engine or nets, so we put our engine and nets in their boat and caught mullet and flathead - some flathead over 9 lbs. After a few weeks Laurie and Owen were able to buy nets, so I got brother Bruce to send his boat up to Wingham and he joined Harold and myself. I bought an old launch at Wingham for £10 and carried out some repairs before taking up residence with my wife from Tacoma in a house in the main street. Our house had a shop front so we started to serve fish meals. The bulk of our fish were sent through the Sydney Market agents, the price fetched for bully mullet being 7 pence per lb, fantail mullet 5 pence per lb, flathead 1 shilling per lb, and expenses would take out 2 pence per lb.

Back to the Tuggerah Lakes in 1945

Due to the rationing we were unable to get enough tea, sugar, butter and potatoes for our shop and in August 1945 returned to the Tuggerah Lakes, bringing with me a hauling net known as a floater. As the Entrance was again blocked from the sea, mullet which could not escape grew to a larger size than usual. Many a large haul (up to 40 cases) was to be taken in Chittaway Creek and Wyong River. After September the mullet left the rivers and hauls of up to 60 cases were caught around Tumbi and the eastern side of the lake. This continued until May 1946 when heavy rain caused a rising lake level and the Entrance had to be opened again, which meant many fish left the lake.

Fishing at Wallis Lake and the purchase of a new launch

In the winter of 1946 I again went north taking a hauling net, and several other fishermen went with me. We caught flathead again at Regatta Island in good quantity, also large sand whiting. The other fishermen included my brother Bruce, Billy Denniss, Eddie Sales (known as 'Tomahawk'), and Alfie Sales. By October 1946 I was able to afford my first new launch and new engine. The hull being built at Nabic cost £80, the builder Mr Billy Mann. I decided to stay up the coast, fishing at Wallis Lake and the Manning River till August 1947, then returned to Tuggerah Lakes bringing back the new launch and gear. At this time Fishing Co-ops were just being established at various places along the coast. Wallis Lake had one established and our fish had been going through it.

Establishment of Fishing Co-ops

When I returned to the Tuggerah Lakes I did a haul near Chittaway, and caught 2 cases of bream and the following day I hauled on the other side, now Berkeley Vale, and got 9 cases of bream and turned away a large number of undersized bream between 8" and 9". Within hours the same area was hauled by a crew who were supplying the buyers of small fish, 36 cases of undersized bream being caught.

During the previous few years fishing had been bad at Tuggerah Lakes and fishermen had been illegally selling under-sized fish direct to buyers. Legal fish sizes were mullet 12" and bream 9".

Mr Frith, the Government official who was organising the starting of Co-ops, had been up to see the fishermen but without success due to the concern that there was not enough legal sized fish to catch. Most catches were undersized and sold directly to buyers rather than being sent to the

markets. Eric Patterson and Mr Shipton were keen to start the Co-op since they wanted to be the manager and secretary. But the local fishermen were reluctant since these two men would then earn a lot higher wages than most of them. I went around some of the locals to explain the advantages of the co-operative system and got Arch Spiers (one of the larger operators) to give it a try. I went to Sydney and convinced Mr Frith to come back with me and we got the Co-op established. The following spring a large quantity of mullet and greasyback prawns were caught, and also trumpeter whiting. Eric Patterson and Mr Shipton were unable to cope with the positions they'd been occupying so a Secretary-Manager was advertised for and filled by a Mr Lowen, with an assistant girl book-keeper, and Allan Spiers got a job as a packer.

Typical prawn catches and fish prices in 1948

Some of my prawn catches in 1948 were as follows;

23/11/48	255 lbs cooked prawns	2 shillings 4 pence per lb wholesale
31/11/48	619 lbs cooked prawns	2 shillings 6 pence per lb wholesale

Most sales were around these prices, the equipment used was prawn net size of 1 inch mesh, 200 yards long. Mullet had a set price of 6 pence per lb at the Co-op, trumpeter whiting 9 pence per lb wholesale, the same prices prevailed in 1949.

The Co-op. was getting good supplies when the Manager cleared out with the funds and the Co-op had to be closed and although court action was taken, the Co-op could not get any of the money back.

Fishing in the early 1950s

In 1949 and 1950 I went back up to Wallis Lake after any legal size fish in Tuggerah Lakes had gone to sea. Many fishermen were doing the same, but others stayed and were again supplying small fish direct to buyers. I was fishing Wallis Lake and Manning River during the winter and returning to Tuggerah Lakes to catch greasyback prawns from late September to Christmas, and would then fish in the lakes until Easter. In the spring of 1951 I returned to Tuggerah Lakes for the prawning, and we were catching a good quantity of greasyback prawns. But at Christmas time the Fisheries Department rose the size of prawns from 3" to 4" and mesh size from 1" to 1¼". There were very few greasybacks at 4", so I had to put the prawn nets away and start meshing mullet. At this time the legal size for mullet was 12" and I bought a 3⅛" meshing net to catch them. In about February 1952 fish sizes were also increased, and mullet, which I was catching, increased from 12" to 14". This made the meshing net obsolete as 14" mullet were scarce and the nets would simply mesh the plentiful 12" fish which were now under-sized.

Working at Wangi Power Station in the early 1950s

Most fishermen, including myself, left the Industry, getting jobs at Wangi Power Station which was being built. I was a contractor, using my utility on the job to take time keepers around the various gangs. Many of those still fishing continued the small fish racket.

Changes to legal fish and prawn sizes in the early 1950s

The authorities finally realised they had made a mistake and reduced legal mullet size to 13 inches and prawns to 3½ inches (and mesh size to 1⅛ inches) in 1953. From my experience I knew the equipment I would require was ¾ inch mesh for mullet. It was not until 23rd July 1953 that ¾ inch net size became available and I was able to purchase some.

Trouble with fishing licences and net seizure in 1953

In February 1953 I had heard a rumour that fishermen who left the Industry would not get a licence again. Mindful of this I sent a cheque (no.17743) from the Commercial Bank at Wyong for £2 and 6 pence for a fishermen's licence and a boat licence, but no licence was issued. After going to Sydney on 23rd July 1953 to get the new meshing net, I called at the Fisheries Department and saw Chief Inspector Eddie Judd. He told me to start fishing after rigging the new net and he would see I got the licences.

I took him for his word and proceeded to pursue mullet at Lake Munmorah, the first night snaring 12 cases, and the second night 10 cases. On that night a crew of 3 fishermen came up after they saw my first night's catch, most of their nets being only 3 inch mesh. They netted 4 cases of legal sized fish and 26 cases of undersized fish, between 12 and 13 inches. I took my catch for both nights to Sydney Fish Markets since the Co-op had closed down after Mr Lowen cleaned out the funds. At the market, the two nights of meshing realised £104 and 6 shillings, however the Chief Secretary of the Department withheld the cheque, saying I would never get it since I had no licence.

On the 3rd night (14th September 1953) while I was waiting for the wind to ease, my net was seized from my boat by the local fishing inspector. Next thing I did was visit Chief Inspector Judd, but he was away, so I took my grievances to the Superintendent of Fisheries Mr N. Harris. Telling him the full account, he directed me to see the local inspector again who under new guidelines had the power of recommendation for licences. Previously it was only necessary to send a cheque for the licence to be issued.

When I went to the Fisheries office at The Entrance, the local inspector refused to recommend it so I had to return to Sydney the next day to see Mr Harris again. He phoned The Entrance and I was eventually issued with a licence. I was also pleasantly surprised to receive in the mail a cheque for £104 and 6 shillings. A few days later the local inspector called around in the Fisheries vehicle and I was taken to Sydney to see Mr Buttsworth, the Under Secretary. He apologised for mistakes that had been made in handling my affairs and said I could pick up the confiscated net at any time.

Resuming hauling and prawning in October 1953

I started to use a hauling net with my brother and his son but catches were initially small, after 3 hauls from 14th to 16th October 1953 only 70lbs of fish were obtained. I got a new prawn net, of 1¹/₈ inch legal size and 150 yards long, and started prawn hauling with my brother-in-law, Herb Jobson, along the eastern side of the lake near 'Deep Dig'. My brother only had an undersized net.

On the night of the 23rd October the local inspector arrived and checked our net but left when he realised it was legal. Next morning, going back across the lake a fisherman stopped Jobson and told him that the inspector was going away for a while and we should try putting on an extra length of net (which was illegal). Herb Jobson wanted to but I said no. That evening my brother saw the inspector coming and hid his net among the bushes. When the local inspector arrived he was with the inspector from Woy Woy, and was carrying a 2 fathom measuring stick. When they saw we had a legal length net of the correct mesh size, they instead charged us for trawling even though we did not have a trawling net with us. We caught 5 cases that night and continued to catch good prawns, a mixture of school, king and a few greasyback. When we went to court and told our story the case was immediately dismissed.

Things quietened down, and we continued prawning. The 1953-54 season was the first appearance of school prawns for many years. Typical prices for the prawns were;

19/10/53 - 68 lbs cooked prawns at 5 shillings 8 pence per lb wholesale;

26/10/53 - 139 lbs at 5 shillings 11 pence per lb wholesale.

After prawning we went mullet meshing, catching up to 60 cases a night, weather permitting.

Fish catches during the period 1953- 1961

In 1953-54 a small quantity of weed and shell-life had started to appear in the lake.

Fish and prawn production 1953-54		
	Prawns (lb)	Fish (lb)
Nov	621	-
Dec	518	-
Jan	-	1285
Feb	-	1500
Mar	-	2291
Apr	-	1833
May	-	1608
Jun	-	1408
TOTAL	1,139	9,925

(Note; The production figures provided in these tables are for Arthur Clouten's share of the catch)

The fish left the lake while the weather was cold in the winter months. In early spring 1954 I went hauling with Herb Jobson, and Artie Johnson. We caught very few fish but up to 800 lbs of eels on some days, which we got 9 pence per lb for. When the weather got warm, the eels got lively and used to go over the top of the net, so we went prawning instead.

Fish and prawn production 1954-55		
	Prawns (lb)	Fish (lb)
Jul	-	-
Aug	-	-
Sep	-	734
Oct	-	140
Nov	780	-
Dec	60	1934
Jan	47	4289
Feb	3924	-
Mar	930	1211
Apr	-	2907
May	-	3038
Jun	-	5437
TOTAL	5,741	19,690

The rapid recovery of the lake for fish and prawns was due to weed and shell life starting to appear after an absence since 1939. The Entrance to the lake was 8 feet deep due to the large flood in 1954. Bream prices were up to 3 shillings per lb, trumpeter whiting 1 shilling 6 pence per lb, prawns up to 5 shillings 9 pence per lb (all prices wholesale). Most fish were being caught by hauling nets, the bunt or bag could be 2 inch mesh or 1¼ inch if preferred. Fishermen achieved good earnings because of the fish being plentiful.

The Co-op reopened in late 1955 with C. Ellis as Secretary Manager and it went from one success to another.

Fish and prawn production 1955-56		
	Prawns (lb)	Fish (lb)
Jul		4025
Aug		3640
Sep		2640
Oct		5245
Nov		2116
Dec	133	1233
Jan	2470	612
Feb	2029	
Mar	1559	70
Apr		1409
May	405	956
Jun		2515
TOTAL	6,596	24,461

The catch for 1955-56 would have been much higher but for the fact that the Fisheries Department stopped us from using a backup net to catch trumpeter whiting, although we had used one for the last 50 years.

Fish and prawn production 1956-57		
	Prawns (lb)	Fish (lb)
Jul		4045
Aug		815
Sep		1293
Oct		2291
Nov	107	2688
Dec	1479	882
Jan	1163	1996
Feb	2214	411
Mar	581	858
Apr	37	1176
May	36	2015
Jun		620
TOTAL	5,617	19,090

During the 1956-57 season the weed was slowly getting better, and the entrance to the lake had been 6 to 8 feet deep since 1954. The prawn catch consisted mostly of school and king prawns of a high quality.

Fish and prawn production 1957-58		
	Prawns (lb)	Fish (lb)
Jul		3350
Aug		1277
Sep		521
Oct		5051
Nov		3742
Dec	100	1249
Jan	26	4220
Feb		4282
Mar		6853
Apr		7420
May		2506
Jun		2714
TOTAL	126	43,185

During the 1957-58 season the weed in the lake was very good, but the entrance was getting shallow. There were some good hauls of luderick which had been absent from lake for many years. Fish were so plentiful that we only went prawning a couple of nights.

Fish and prawn production 1958-59		
	Prawns (lb)	Fish (lb)
Jul		3502
Aug		4177
Sep		859
Oct		3296
Nov		1608
Dec	819	369
Jan	368	1866
Feb		2986
Mar		5609
Apr		3418
May		2440
Jun		3056
TOTAL	1,187	33,186

Weed growth was very healthy during 1958-59 and luderick were plentiful, fetching from 6 pence to 1 shilling 6 pence per lb, mullet 9 pence to one shilling six pence per lb, and bream 2 shillings 6 pence to 4 shillings per lb.

Fish and prawn production 1959-60		
	Prawns (lb)	Fish (lb)
Jul		850
Aug		2466
Sep		532
Oct		2303
Nov		3989
Dec		2635
Jan		2240
Feb		2032
Mar		2557
Apr		1575
May	30	1581
Jun		1440
TOTAL	30	24,200

In the 1959-60 season the entrance became very shallow and the large amounts of weed were preventing the use of prawn nets, so only 30 lbs of prawns were retrieved. On some days problems with slime and 'wool' (a short life weed on the lake bottom) reduced the catch. Tried to get Dr Thompson of CSIRO to have a look at the slime.

Fish and prawn production 1960-61		
	Prawn (lb)	Fish (lb)
Jul		820
Aug		880
Sep		1195
Oct		1971
Nov	30	2304
Dec	220	429
Jan	1958	-
Feb	679	-
Mar	945	41
Apr	614	1777
May		1591
Jun		2874
TOTAL	4,446	13,882

During this year (1960-61) there was lots of slime wool and nearly all hauling landing grounds overgrown. Owing to bad slime condition of the lake, the hauling net was unworkable, so I went

meshing and caught 13,882 lbs of fish. Also, the prawn grounds were overgrown and there were very few places to haul a prawn net. Most prawns were instead caught by the trapping method as a net could not be hauled. Wrote to Fisheries Department requesting that a sea wall be built at The Entrance to increase the flow of sea water into the lake. Also wrote to the Premier Mr Heffron but no-one seemed interested in the welfare of the lakes.

Campaigning against new regulations in the 1950s

Since about 1954, Progress Associations and other persons have been asking that the lake be closed from net fishing. These rumours came from misleading statements from the Fisheries Department. Also several Shire Councillors were declaring the same, especially that hauling nets be stopped. Budgewoi and Munmorah Lakes had been closed to hauling since 1952. In 1955 fishermen from Lake Macquarie came over, illegally trawling for prawns and this stirred up residents around the lake.

I realised something must be done to defend the local fishing industry from the demands of misinformed people. I started to attend meetings of the Wyong Advisory Committee which was trying to get industry into the Wyong Shire. I explained that fishing was good and would continue to improve as the weed position did the same, and asked that a meeting be convened and the Fisheries Department be invited to attend. This was so the true facts could surface. The meeting was convened by Wyong Council in March 1955. The Superintendent of Fisheries Mr Harris stated at this meeting that ten years ago, Tuggerah Lakes produced around 1.5 million lbs of fish and this had dropped to approx. 0.25 million and therefore consideration should be given to closure. What he neglected to mention was that the number of hauling and meshing nets being used in the lake had decreased, and that ten years earlier legal fish sizes were smaller, hence a larger proportion of catches were marketable. The legal length for prawns had increased and so had the mesh size, so there were less prawns to market. Combine this with less fishermen on the lake, and two lakes being closed to hauling, and it is no wonder the Fisheries statistics came out the way they did. As a result of the comments by Mr Harris there was a fresh outburst against the fishermen for several weeks.

The Entrance closure area was increased by the local Inspector in March 1955 back to the 1893 line, and then the use of a backup net to catch trumpeter whiting was done away with despite the fact that it had been used since 1883. To gain support for these new restrictions, the public were being told that the lakes were fished out.

Formation of a Fishermen's Association in 1955

I was a member of the Wyong branch of the Labor Party and went around the fishermen of Tuggerah Lakes to get a meeting together. The meeting was held in October 1955 and was attended by Councillor Arthur Nichols, President of the Wyong branch of the party. Rupert Wallace, President of the Gosford branch also attended at my invitation. A Fishermen's Association was formed, myself as president and A E Clifford as secretary. Two matters were discussed, the backup net for trumpeter whiting and a proposal for daylight trawling of prawns. A deputation was selected to go to the Chief Secretary Gus Kelly asking for a trial haul for trumpeter whiting with a 1¼ inch backup net, and later 2 hauls were made with Inspectors Arentz and Wakeham present. These hauls proved that such a net could be used without killing other small fish. After a delay of several weeks, I called at the Chief Secretary's Department in Sydney and saw the Under Secretary, Mr Buttsworth. He said that the Fisheries Department was worried that each year at Christmas time large quantities of small sand whiting came into the lake and would be killed if the backup net was allowed. I told him that was not correct, maybe they would appear and maybe not, but if they did I would let him know and we would take the nets off until they left or grew large enough not to mesh.

On returning home that afternoon, rumours were spreading that I had been to the Fisheries Department and as a result no backup net for trumpeter whiting would be forthcoming, as well as

a delay to legalising daylight prawning. A meeting was called by A E Clifford and was attended by the local inspector. I was blamed and held responsible. At the meeting only one fisherman defended my action, Mr Gerating, after which most fishermen would not speak to him. This played on his mind and I believe it was the main reason he committed suicide. I wrote to Mr Buttsworth and told him what had occurred and later received this letter.

	Chief Secretary's Dept 10.1.56 Ref: 55/1842
Mr A G Clouten Tacoma	
Dear Sir,	
I refer to your letter of the 17th December 1955 regarding representations made for permission to use a back net in the waters of Tuggerah Lakes for the catching of Trumpeter Whiting and desire to inform you that this matter is still under consideration and as soon as a decision is reached you will be advised. With regard to your allegation against the local Inspector, Mr Arentz denies having made the statement mentioned in your letter but stated that he informed a meeting of fishermen that if further representations were made after a case had been presented to Head Office such representation would have to be considered and delays might occur.	
	Yours Faithfully Buttsworth Under Secretary

Later I received a copy of this letter:-

	14th March, 1956
Mr. R. Wallace, Hon. Secretary, Gosford Branch Australian Labour Party, 24 Althorp Street, East Gosford.	
Dear Sir,	
I refer to your representations of the 3rd February, 1956 regarding a deputation of fishermen from Tuggerah Lakes who requested that hauling crews in these waters be allowed the use of a back net. This matter has been closely investigated by Senior Fisheries Officers but is opposed by them on the grounds that during the summer months this small mesh back net would kill countless thousands of undersized fish particularly sand whiting measuring from 4 inches upwards. In addition Senior Fisheries Officers consider that when blubber is thick, even further mortality amongst fish will result, and they also draw attention to the fact that the small mesh will catch garfish for which there is a closed season from the 1st October to the 31st March each year. This net will also catch prawns which would make the supervision by the District Inspector of the regulation prohibiting the taking of prawns in daylight hours almost impossible. As an experiment this regulation is not being enforced at present but it may be necessary to withdraw the present concession at any time if it should be found that prawns caught during such hours are unsatisfactory for marketing purposes.	
A factor of considerable importance is the strong feeling evinced by a large section of the community representing amateur fishing interests, at the depredation of fish stocks by destructive methods of netting. Where fishing grounds are in popular tourist centres, the reaction is particularly unfavourable. In the circumstances it is not possible to accede to this request and my Department is informing Mr. Clifford and the other interested persons accordingly.	
	Yours faithfully, C.A. Kelly. Chief Secretary and Minister for Immigration.

I resigned from the Fishermen's Association and have since battled on my own. At this time the local Progress Association was declaring there was no fish in the lake and was asking that Tuggerah Lake be closed against the hauling net from Pipe Clay Point across to Cedar Wharf Corner,.

Changes to prawning regulations in the late 1950s and early 60s

In 1959 daylight prawning was made legal for the first time. The minimum legal size for prawns was also abolished; the reason was that the Fisheries biologist, Dr Racek had said it was serving no conservation purpose.

In 1959 and again in November 1960 a prawning demonstration was held by the Fisheries Department on Tuggerah Lakes using a net with 1¼ inch mesh. The Fisheries Department wanted to raise the mesh size from 1¹/₈ to 1¼ inches (Tuggerah Lakes fishermen had been granted a concession to use 1¹/₈ inch mesh). While only a few prawns were caught, the recommended increase was passed into law in May 1961 on the basis of this unconvincing demonstration.

I wrote many letters in an endeavour to have the mesh reduced to the former 1¹/₈ inch size, however I couldn't achieve the desired result (see Appendix 2).

Unable to make a living, many prawn fishermen resorted to prawn trapping and illegal otter trawling. I asked that trapping be allowed whilst there was a large amount of weed in the lake and the increased prawn net size prevented catches by hauling.

On the 2nd February 1962 I was told it had been investigated and could not be allowed but my other enquiry regarding the mesh size for prawn nets was still undergoing investigation. I pointed out that no similar lagoon existed along the coast except for Lake Illawarra and they had the use of a running net. A short time later the local Inspector came by and told us we could use a running net with a 1¼ inch mesh, and later we received a letter of confirmation from the Chief Secretary (see Appendix 2).

So H Jobson and myself rigged up one and were able to get good catches of prawns by running them instead of hauling them. A running net is used from a boat in deeper water and is more effective at catching prawns than a hauling net of similar mesh size.

The illegal trawling for prawns continued however, and in early September 1962 I wrote to the Chief Secretary, Mr Kelly, complaining about the illegal activities and suggesting that prawn trawling be made legal so that all fishermen could make a decent living, not just those operating illegally (see Appendix 2).

Rumours were spread about the lake that I was reporting fishermen who trawled illegally. My launch had a piece of plank knocked out and sank.

In the 1963-64 season good prawn catches were made with the running net;

November	1,502 lb
December	2,484 lb
January	2,300 lb
February	2,558 lb
March	1,883 lb
April	972 lb
TOTAL	11,699 lbs

In 1964-65 season;

October	49 lb
November	1,321 lb
December	652 lb
January	451 lb
February	1,283 lb
March	312 lb
TOTAL	4,068 lbs

The 1964-65 season started slowly on account of there being too much blubber which interfered with the nets. Early in December the illegal night trawlers started prawning near where our running net was operating, and our catches dropped immediately. I had to leave this position for another part of the lake.

Illegal prawn trawling in the 1960s

I continued to complain about the number of illegal trawlers but the local inspectors would not take any action. The reason why other fishermen would not support my efforts was that one third of them were illegally trawling. If it was legalised the other two-thirds would also be able to trawl and this would have led to decreased earnings for the present one third who were operating illegally. At meetings, the illegal operators would vote against making prawn trawling legal. It was simply a matter of greed running the system. I wrote to many people including Mr R Askin, leader of the opposition, who passed my letters on to the Chief Secretary;

Chief Secretary
121 Macquarie St, Sydney
29 Jan 1965

R W Askin Esq M L A
Leader of the Opposition
Parliament House
Sydney

Dear Mr Askin,

I refer to your personal representations of the 6th, 8th, 12th and 25th January 1965 with which you enclosed letters forwarded to you by Mr A G Clouten of Tacoma in which he complained of illegal prawn trawling in Tuggerah Lakes.

The Department is well aware of the activity referred to by Mr Clouten and contrary to his view every effort has been made by law enforcement officers and particularly the Officer permanently stationed at the Entrance to stamp out these activities. The District Inspector had been assisted in his efforts by two Inspectors from the Newcastle District and by the Inspectors in charge of the districts of Swansea (Lake Macquarie) and Woy Woy.

Unfortunately persons engaging in the illegal trawling for prawns in Tuggerah Lakes and in other waters along the coast are equipped with fast launches and operate on such an organised basis as to make the task of apprehending them most difficult indeed. Notwithstanding the difficulties the Department's Officers have been successful in apprehending a number of the persons involved and prosecution action is being taken where ever possible. Other measures are being examined which it is hoped will be effective in stamping out the activities of the irresponsibles involved.

In imposing a prohibition on the use of trawl nets in estuaries and lakes such as Tuggerah Lakes, the Department is acting on advice made available to it by its scientific officers which is to the effect that this type of fishing is extremely harmful to the fisheries in these particular waters.

The Department is not unmindful of the recreational needs of the general public and in this connection the restrictions against the use of trawl nets in popular waters like Tuggerah Lakes are certainly warranted for this reason. The suggestion by Mr Clouten that if the illegal trawling cannot be stopped it should be legalised cannot be entertained. Whilst the concern of Mr Clouten in this matter is appreciated the Department can

assure him that everything possible within the limits of the Department's resources is being done to curtail the illegal activities which are the subject of his complaint.

Should the remedies being employed fail to deter the persons responsible for the illegal trawling I will need to consider whether the situation warrants the cancellation of the licences of fishermen convicted for this offence.

Yours Faithfully
G A Kelly
Chief Secretary
Minister for Tourist Activities

The statement that fishermen had fast launches was false, most launches around were only 6 to 8 miles per hour whereas the Inspector's launch had the potential of 40 to 45 miles per hour. The most powerful and fastest launch, with a 6 cylinder car engine, was owned by Brian Smith who was caught on the 14th January 1965 by the Inspector, after they had a fall out. The court case was reported in the local newspaper on 18th August 1965, under the heading *Man Nearly Swamped Inspector's Boat*. He was fined £30 and ordered to pay £3 court costs.

On several nights while we were using running nets, Brian Smith had been chased by the Inspector, and would run for the safety of our running net and stay there until the Inspector went, but all other otter trawlers kept trawling and weren't chased. The illegal trawlers would cross the lake at approximately 6pm every evening and go ashore to make a campfire and have tea before commencing trawling just after dark. They were usually only about 2 miles from the Inspector's office at the Entrance.

Prawning breaches publicised in 1965

It was not until I put the following letter in the Advocate that the interference from illegal trawlers stopped, and a new inspector, Jack Trifford arrived. The letter dated Jan 6th 1965 was headed "PRAWNING BREACHES" and starts :

Fishermen using running nets for prawns have been hard hit by other licensed fishermen using trawls of small mesh and low-powered launches in the area where running nets are operating, claims Mr. A G Clouten of Tacoma, in a letter submitted for publication. He continues: "In 1961 the Fisheries Department increased the size of mesh to 1¼ inch for prawn nets, making it difficult to make a reasonable living using a prawn hauling net. "Many letters have passed between the Chief Secretary, Mr Kelly, the former Premier, Mr. Heffron and myself in an effort to get the size reduced to the former 1.125 inch but without avail. "Trawling under strict supervision would have little effect on prawn stocks, but when carried out with illegal gear over long periods, spells doom for the prawn industry in Tuggerah Lakes. "In 1962 after I made application for both night and day trawling on a limited scale, false rumours were circulated about me. "My launch was deliberately damaged & two thugs were put on my trail." [Mr Clouten showed the 'Advocate' some letters which had passed between himself and various Government departments; the letters appearing to confirm his statements that he had been seeking a reduction in the mesh and a legalising of prawn trawling under careful supervision. Ed.]

Mr Clouten's letter continued: "It is not fitting that fishermen who are trawling in an area where others are using the running net should be allowed to keep their illgotten gains." Mr. Clouten said he intended going to Sydney soon to confer with his solicitor concerning his allegations of illegal prawning in Tuggerah Lake.

By the 9th April 1965 the prawning season was finished. When the next season started in the following October, some of the illegal trawlers started using legal running nets but not all of them. The remaining illegal operators now kept well away from the legal running nets.

Introduction of snigging in 1966

Meanwhile, despite the interest Mr Askin had earlier shown he would not take the time to meet with me. His new government did nothing until the 21st December 1966. On that day the Fisheries Department permitted the use of 1 launch to pull the prawn net of 1¼ inch mesh. It is now called a 'snigger net', but is actually a trawl. This stopped the otter trawling, everyone using the snigger trawl instead.

The snigger net can be used all over the lake, on weeds and all depths of water, day or night, from August if prawns are about, to May or June, 7 days a week under rough or fine conditions. Now in a good season with a good entrance over 100 fishermen could be prawning in the lakes, some coming from Lake Illawarra and Lake Macquarie. In some launches there might only be one fishermen, other launches have 2 fishermen aboard, so up to 80 launches could be operating at various places on the lakes. The only area where this net cannot be used is near rocky reefs, or where there is weed known as "wool fluff" which would pull up the net making it too heavy to drag.

Prawning with the running net and by snigger trawling

In the 1966-68 seasons very few running nets operated owing to the variety of prawn changing from school and king to greasyback. The running net of 1¼ inch mesh was too large for catching greasybacks

Initially many fishermen also found it difficult to catch the greasyback prawns by snigging with a 1¼ inch net, and some reverted to using smaller mesh sizes. However, on the 13th March 1967 three fishermen were caught by the newly appointed Fishing Inspector for using these undersized nets and were each fined \$10 (see Wyong Advocate 7th July 1967). So in order to catch the greasyback prawns most fishermen obtained more powerful motors which would tighten the net and close up the mesh when snigging. This allowed good catches of prawns.

The running nets were eventually reduced to 1¹/₁₆ inch mesh in about 1972 but very few greasyback prawns were about, most prawns being the school and king varieties during this time.

The prawn running net is used at night when prawns are on the run, travelling around the lake. This occurs mostly from October to April, 2 or 3 nights after full moon to 2 or 3 nights after the new moon. There may be unsuitable weather some nights, so on the whole only 10 or 12 nights per month can be prawned for reasonable catches. Therefore it is necessary to have another prawn net capable of catching them during the other part of the month. The snigger trawls fulfil this purpose and are capable of catching prawns with 1¼ inch mesh since the power of the launch pulling the net through the water closes up the mesh.

Towards retirement in 1981

In 1962 I partly lost the use of one hand and the doctors could not do much as the nerve was affected. I finished hauling for fish in 1963. After that I only meshed for fish, and used a running net for prawns. To do any prawning/fishing with only one strong hand required very light boats which are too small for the large heavy engines. In Sept 1966 I had an operation on the hand which gave a slight improvement making it 40% useful. I was daylight prawning until 1970 and after that only night prawning, using a running net a few nights, and also meshing mullet and luderick approximately 60 nights a year.

My wife died on the 26th December 1972 after years of sickness.

In May 1973 I went to the Manning River, fishing for 3 months and catching more fish than I had done in the period from 1943 to 1945 but prices were low, 2 and 3 cents per lb for mullet. In the month of October 1974 I sold my utility and trailer and decided to take things easy for the next

few years before I retired altogether, which I did on 25th December 1981, receiving a reduced pension of \$102.90 and no fringe benefits. In 1981 my grandson, Michael, took over from me, working with Herb Jobson.

2. More notes from a diary written in early 1960s

The history of weed in the lakes

The history of weed in Tuggerah Lakes was given by me to Wyong Shire Council in 1956 along with a sketch map of the weed in Tuggerah Lakes. I received a letter of confirmation from the Council on the 4th March 1957. Over the years I have sent copies of these maps to many Government officials and politicians. (*These maps are shown in Figures 2, 3, 4 and 5*).

Weed and slime wool in 1960

Last year (1960) when I started to use the hauling net in November the slime wool was so bad some days the net would have to be picked up broken in half. But when a landing could be made a good quantity of bream could be had. By December we had to put this net away and go prawning because there was only a couple of places in the lake where a net could be hauled in. Shortly after that, about February, those two places got too bad and now for several months no hauling nets could be hauled and this coming year none may be done so a big drop can be expected. All fishermen will have to go meshing or prawning if there is any prawns to haul left.

Mud, slime and smell increasing (1961)

If something is not done soon the Tuggerah Lakes will be in such a mess with regard muck and slime that no prawning or fishing can be done and fishermen will have to leave for other places until the lake cleans up. People who bought land close to the lake which had nice sandy beaches have now mud and slime and a strong smell.

The true facts about fish catches

Now the true facts are as follows. During the last ten years (1951-61), two of the three lakes were closed against the use of the hauling net. This net had been reduced from 1500 yards to 1100 yards, sizes of mesh increased, all fish sizes was increased so that a greater proportion of the catch had to be thrown back in the water. Meshing nets size increased. Tallow which had no size limit went up to 12 inch, then on top of this several fishermen who were large catchers, got too old and were replaced by men who catch very small catches by set nets.

Prawning in Tuggerah Lakes

Prawning in Tuggerah Lakes used to be a big industry before the weed died in 1939. The best seasons were those after a large flood. The flood water would cut a large entrance to the lake and so plenty of sea water could come in and also prawn spawn would enter in large quantities. King and school prawn spawn at sea and the spawn comes in with the tide. With a small entrance, less spawn comes in to hatch in the lake. In the 1920s to 1934 school prawns after a wet season would amount to hundreds of cases per season. Some mornings 200 cases would be sent to market but prawns were worth only a few shillings per case and at times would not clear expenses so would not be caught. The net used to catch these prawns was of $1\frac{1}{8}$ inch mesh when new, but after tanning would shrink to 1 inch and the legal size of prawns was 3 inch yet no-one ever caught small prawns. Yet in tidal rivers or at sea, small prawns are caught (some only 1 inch long) in a net with much larger mesh and the reason for this is because of the power of the boat used. In Tuggerah Lakes a prawn trawl could use $1\frac{1}{8}$ inch mesh and would be pulled by a 5 h.p. launch on clear bottom and no small prawns would be caught. If 10 h.p. engines were used the result would be a quantity small prawns, as the power closes up the mesh with the strain which is on the net. Small prawns are also caught in tidal areas because the tidal flow presses them broadside to the net.

Dr Racek had said in a statement to the press that prawns should not be in the lakes, and it wouldn't matter if they were all caught since the sea was the source of the prawns, but the true facts are just the opposite. The estuaries along the coast are where prawns are mostly caught and it is only after a flood that any large quantity are caught at sea near the entrances of rivers etc. School and King Prawns grow in the lakes and rivers, then go to sea. They spawn at sea and the spawn washes back into the estuaries with the incoming tide.

Fish production

The Fisheries Department talks too much about production. Fishermen do not get paid on production but on quality of fish. Most years lately the common fish, mullet and luderick, are too cheap to bother catching from January to June, and at times would not realise enough to pay expenses. So rather than go for production, fishermen go for the dearest classes of fish such as bream, whiting, flathead, which are scarcer throughout the coast. If all varieties were the same price then a fisherman would go for production. For several months of the year, 2 or 3 cases of bream are better than a boat full of mullet. This was not so during some of the years when there were fixed prices of; mullet 6 pence per lb, bream 9 pence per lb, then mullet would be caught instead of bream because they are much more plentiful in their season. A dairy farmer gets so much for milk, the more milk production the more money, but a fisherman has to watch that he doesn't catch too many fish in the wrong time, it is not nice to have to put in money to make up expenses if the fish don't achieve a good price.

The apparent scarcity of fish

Many holiday makers think that fish are all over the lakes. This is not correct, many areas have very little while other places have a considerable quantity. In some seasons fish such as bream may only be caught at two or three hauling grounds around the lake. These hauls can be fished every two or three times per week and many times the last haul is the best. Sometimes a holiday maker gets a boat, goes out and is lucky enough to pick the right place and providing the fish are hungry enough catches a nice lot of fish. So he comes again next year and goes to the same place and catches none. So he says, there is none in the lake, yet within a mile there may be plenty. The experienced line fisherman will move about until he gets on to the fish and usually get a fish or two but these men are few compared with the ones who have no idea. In clear sea water the fish can be seen so if he catches none he says they're not on the bite. But in the lake the water is not clear enough to see, so he says there are none in the lake.

A permanent opening at the Entrance *(written in 1961)*

I believe that should Tuggerah Lake acquire a permanent entrance the amount of fish, prawns etc. would amount to several hundred thousand pounds. When the entrance is small both prawns and fish catches drop. After a major flood which cuts out the entrance, fish and prawn supplies increase sharply, until the entrance starts to sand up again. Then drop just as quickly. In my experience the worst time is just before the entrance closes completely up. Should there be small fish in the lake when this happens the following 2 years show an improvement, but a prolonged period kills the fish food which takes a long time to recover. When completely cut off from the sea, greasyback prawns soon reappear in large quantities, but these prawns do not have the good qualities of the school and king prawns, which need sea water to spawn and appear just as plentiful if a large enough entrance is available. Many years ago when big floods were to be had fairly often and a large entrance was cut, jewfish were caught in the lakes in good quantities. But on account of the small entrance none are now in the lake.

In the year 1953 a flood cut the entrance to a depth of 6 to 8 feet and school prawn and fish improved until the entrance became too small again.

A note about fishermen's income (*written in 1962*)

In the years from 1924 until 1940, most hauling gear was owned by one man of the crew and the men helping to use this net were on shares. Usually 3 shares for the owner of the gear and one each per man, most gear needed 6 men, and on many occasions the 'share men' would get less than £1 per week. 'Share men' for the whole year would be lucky to get from £100 to £150 per year.

It was not until 1941 that fishermen earned enough to pay taxation, and even then it was only one or two pounds. A net known as the 'whiting net' was cut out in the 1940s, this net was a good money winner when in use. Since 1954 the earnings of the leading fishermen have been high, and would have been much higher except for fishing restrictions imposed in 1952.

The history of the Entrance channel (*written in 1965*)

In the years the ferry operated to Wyong from the Entrance the area below the bridge was mainly deep water, the main channel going down the south side close to the shore, a small flat being on the north entrance side, boats would have no trouble going to sea or coming in if weather was fine, the channel from the Entrance to the lake was also deep and at times dredged out, the large ferry was licensed to carry 120 passengers. After the ferry service was discontinued when the buses took over, the ferries went out through the Entrance to various places along the coast. The channel from Picnic Point out to the Lakes then became shallow restricting the flow of tides and sand gradually filling up the area below the bridge. By the time Wyong Shire Council got the first dredge and after doing the Wyong River, shifted to the Entrance area near the lake, a considerable area had already filled in below the bridge, making a bad narrow channel at the bar. Now by 1965, at times very bad but can change with rain or weather conditions and can get a suitable channel for a short time.

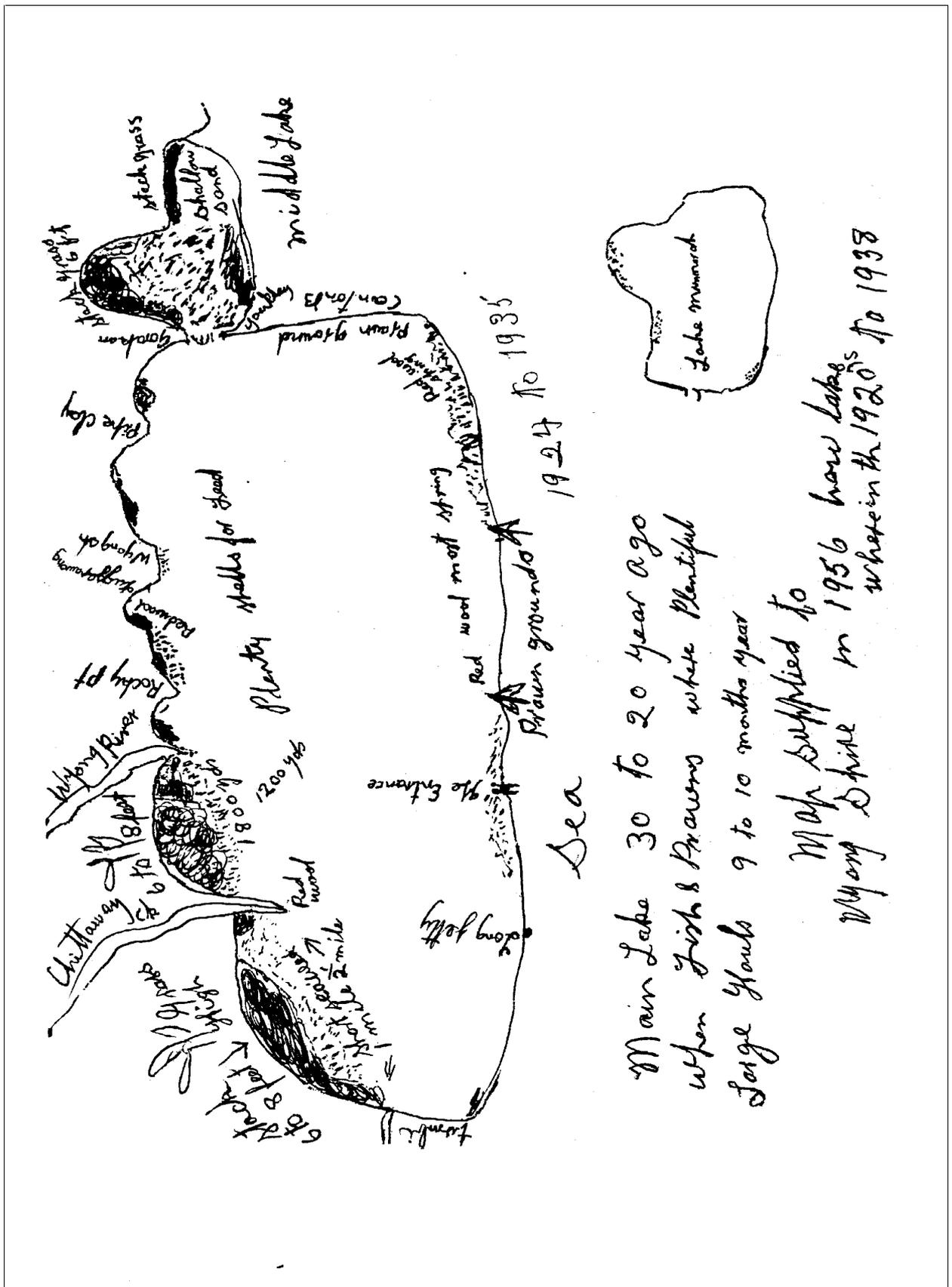


Figure 2: Sketch map of 'weed' in Tuggerah Lakes in 1920s and early to mid 1930s. (Drawn by Arthur Clouten in 1950s)

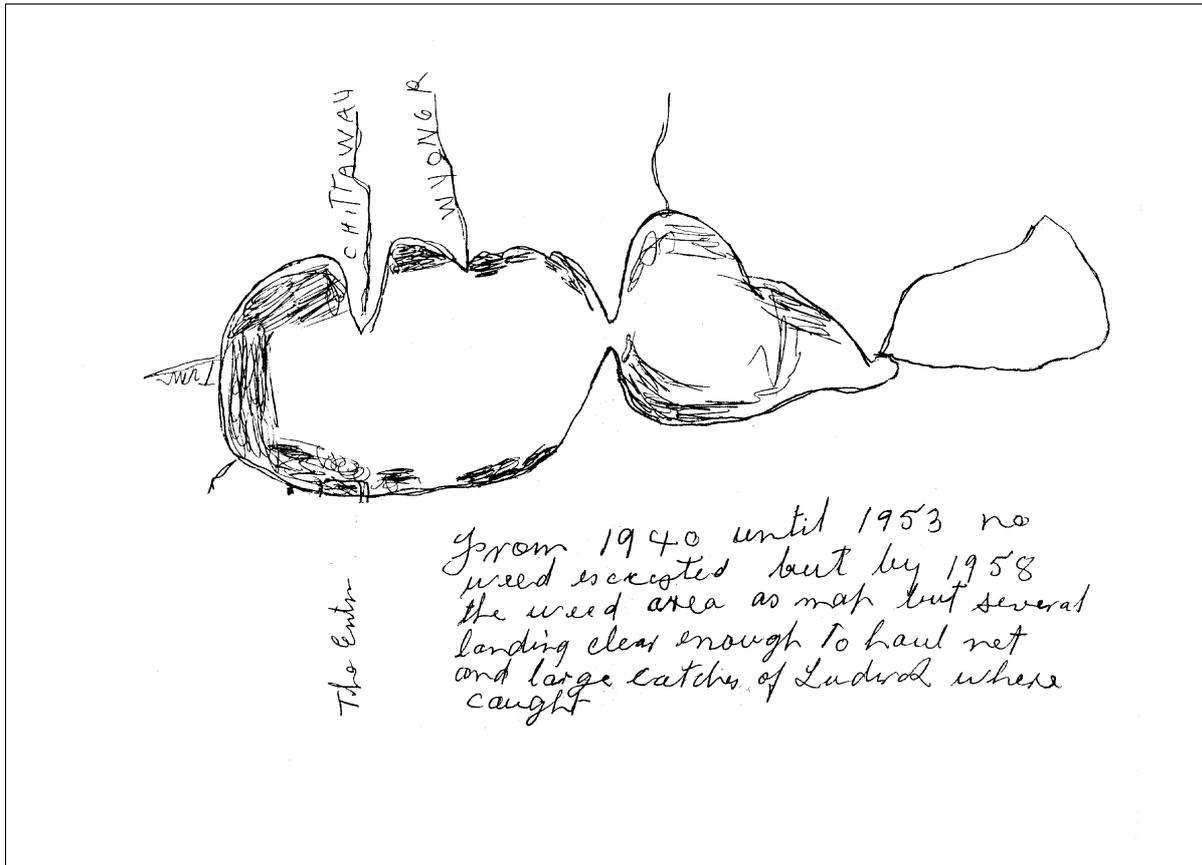


Figure 4: Sketch map of 'weed' in Tuggerah Lakes in 1958. (Drawn by Arthur Clouten)

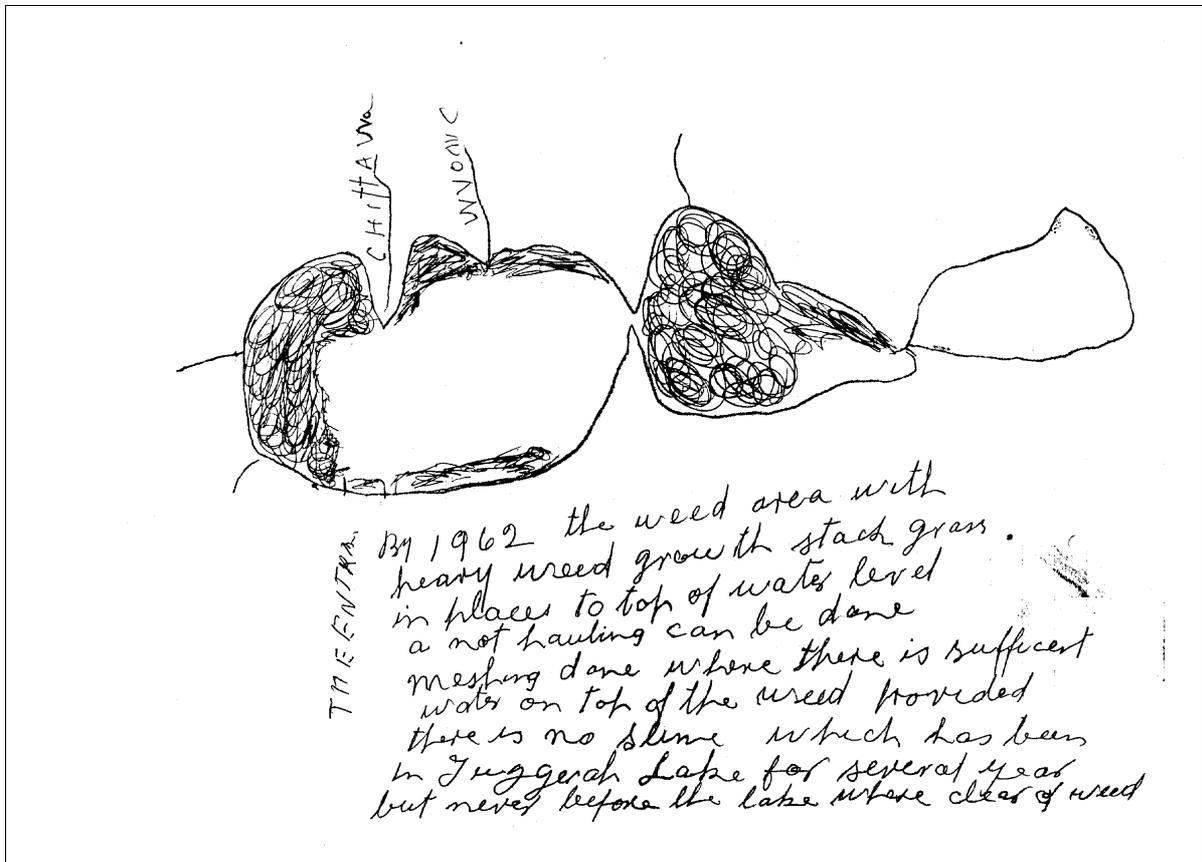


Figure 5: Sketch map of 'weed' in Tuggerah Lakes in 1962. (Drawn by Arthur Clouten)

3. Extracts from diaries in the 1980s

Fish and prawn catches in 1980-81 season

25 April 1981; This season prawning for 7 months (Sept to March) and catches were small due to the 'drought' conditions, and the entrance practically closed from the sea. Mostly king prawns of high quality and high prices producing better return than last season even though total catch number was down. Bream in good supply, so too was mullet, while luderick not so plentiful due to very little weed around as well as stack grass not present in Wyong Bay. It was a successful year for fulltime fishermen catching daylight prawns and bream, and mullet were more abundant than average.

Larger channel improves prawn catches in spring 1981

23 October 1981; Since the dredge has been operating, removing a fair quantity of sand near Entrance bridge, an improved water flow has resulted to and from the sea. This coupled with 3 small floods in February, March and May has helped things. There has been a marked improvement in king prawn catches along the sand hills area. With the running net Mr Russell Massey had catches of 15 cases and 12 cases in a couple of nights. It has been several years since this kind of quantity has been captured with running nets in that area. Due to the floods, more large king prawns will go back to the sea so next 'darks' (nights without visible moon) should have some excellent catches.

Proposed Power Station will harm prawns.

29 October 1981; Today took letter to manager of Tuggerah District Co-op at Tacoma regarding Chittaway Power Station. The likely effect would be a virtual elimination of prawn stocks. Also posted letter to Dr Donald Francio, Director of State Fisheries on the same subject.

11 November 1981; Wrote to Shire Clerk regarding the possible effect a Power Station would have on prawn stocks if built at Chittaway Creek area.

19 November 1981; I wrote to Paul Landa, Minister Energy today, regarding the prawn stock in Chittaway Creek area if proposed Power Station is built there. Wrote Cr. H. Moore M.L.A. Tuggerah similar letter on 21.11.81 regarding prawn stocks and suggested alternative site for power station than the Chittaway area, at Fitness Camp on Lake Macquarie which is Point Wolstonecroft. (see article in Gosford Star on 25th November 1981)

May 1982; Received the following letter from Mr Paul Landa, Minister for Energy and Water Resources.

Minister for Energy and
Water Resources.
28th May, 1982.

Mr A.G. Clouten,
16 Wolesley Ave
TACOMA. 2259

Dear Mr. Clouten,

I refer to your letters about the impact of the existing power station on prawn stocks in the Tuggerah Lakes and Lake Illawarra.

I am informed that the NSW State Fisheries has collected data on the total prawn catch from the Tuggerah Lake since 1941 and from Lake Illawarra since 1900. Therefore there exists ample data to allow assessment of the impact of Munmorah Power Station and Illawarra Power Station on the prawn fisheries of Tuggerah Lake and Lake Illawarra respectively.

Based on this data the New South Wales Fisheries has concluded that the operation of Munmorah Power Station has had no adverse impact upon the prawn fisheries of Tuggerah Lakes and the prawn stocks were in a stable phase for 13 years prior to commencement of Munmorah Power Station in 1967 and no decline was observed after 1967.

Should you wish to have more information on this matter you might like to refer to a report published in 1978 by the NSW State Fisheries entitled Report on Studies of the impact of the Munmorah Power Station on the Tuggerah Lakes Prawn and Fish catches.

Similar comments can be made in relation to the impact of the Illawarra Power Station on Lake Illawarra. Data on prawn and fish catches in this Lake are readily available from the State Fisheries Department and they are reported in an environmental assessment project carried out on behalf of the Council of the City of Wollongong by Wollongong City Council and the university of Wollongong, September 1976.

The Commission is aware of the various impacts the operation of a Power Station may have on the environment and either carries out its own research or makes funds available to expert bodies such as university Departments and State Fisheries to carry out environmental monitoring around existing Power Stations to ensure early detection of any undesirable effect.

I am assured that so far no such effects have been observed.

Yours faithfully,

Paul Landa

Minister for Energy and Water Resources.

The letter stated that for 13 years prior to 1967 prawn stocks were in a stable phase. Thirteen years before would have been 1954 when a large flood cut a big entrance to the sea and the weed started to appear after an absence of 18 years, the variety of prawn changed from the greasyback to the school and king prawns. While large catches of bream resulted in Lake Munmorah until the Power Station started in 1967, very few have been caught there since.

If a Power Station was built at Chittaway, cooling water taken from the Tumby/Chittaway/Wyong River area would ruin the main lake for the school and king prawns as it has done to the greasyback prawns in Lake Munmorah.

In the last few years with a small channel to the sea only a small quantity of school and king prawns, these drought conditions of the last 5 years should favour the greasyback prawns, yet very few were caught.

Also, a Power Station in the Tumby-Chittaway area would destroy the garfish supply as garfish eggs float about until hatched, they would be drawn into inlet canals then into hot water, cooked and return to the lake via the outlet canal.

Good prawn catches in January 1982.

24 January 1982; Prawns very good in quantity and quality, 2 large catches being made Friday night 22nd January 1982 in the Long Jetty area, 1 catch by N. Patterson and Ron Denniss - 52 cases; the other 50 cases nearby by Allan Denniss and Gordon Denniss. These catches would be far more than other catches since the running net was first used in Tuggerah Lake in 1962. Many large hauls also by daylight trawling this year.

Prawning in Tuggerah Lakes

June 1982; The school and king prawn both spawn at sea and fertilized spawn comes in with incoming tides, hatches and goes into the weedy areas of the lakes and up Chittaway and Wyong River until matured. Several cases are caught by net in the Wyong River each year. Of school and king prawns most are caught in the Chittaway-Tumby Area, and some in the Wyong River to Toukley area. A small quantity go through into Budgewoi Lake to be caught in the currents

created by the Power Station and forced into Munmorah Lake. They are then forced by the current into the inlet channel, are caught on the inlet screen and then washed into the outlet channel where they provide feed for fish waiting at the exit point. Also, at various times, thousands of prawns are killed when a solution to kill the weed growth is put in the cooling water at Power Stations. The same will occur if the proposed Power Station is built in the Chittaway area. Many good hauling grounds will become unworkable because of the current created by the Power Station.

Several years ago, the Entrance was closing up due to the build-up of sand. The Shire dredge was sent to the Entrance, shifted the sand and this resulted in fishermen earnings this year (1981-82) increasing by more than double and for some fishermen up to 3 or 4 times their normal earnings. Co-op sales were around the 2 million dollar mark, over double any previous figure and would have been much higher if all prawns and fish had gone through the local Co-op.

Entrance almost closed in March 1983

4 March 1983; The entrance to the sea is practically closed and has been very shallow for over a year and as a result both prawn and fish are down in production and fishermen's earning will be down and will continue to decline until there is a major flood, of at least the 1953-54 level.

Small Entrance channel restricts fish and prawn catches

2 December 1983; During the last couple of years the entrance to the lake has been very small resulting in low catches of prawns, most being greasybacks which breed in the lakes, not king or school. Also weed cover in the lakes is well below average resulting in lower catches of fish although several good catches were made at various times. This position will remain until large floods occur like in 1949 and 1954, then large catches of school prawns will be caught also fish supplies will improve.

24 February 1984; This year only a small quantity of prawns caught, mostly greasyback prawns of small size, and at a price of \$5 per kilo. This lack of prawns is due to the entrance being too shallow and narrow, as well as the depleted amount of weed. Fish are also scarce.

Changes in weed and mud

22 May 1984; When Wyong Shire took over the area in 1946 from Erina Shire they inherited a very clean Lake and mostly a good clean foreshore, weed free. This was not always the case as Tuggerah Lake was a very weedy lake in various places, also mud from decaying weed. In the years from 1954 this weed again appeared and increased until it was a very weedy lake again. As this weed increased so did the fish and prawn catches. Now the weed has declined mainly because of the poor state of the entrance resulting in small flow.

In the 1950's I made several rough maps of the 3 lakes of Tuggerah, and I gave copies to Wyong Shire Council. I was very concerned that people were buying land in low lying areas where these weedy, muddy areas had been, without being told that previously large areas of weed and mud had existed and that this condition could return in the future, which it did.

'Old Uncle' a well known fisherman from early this century

23 May 1984; Much information regarding weed, floods etc I got from those fishing for many years before I started in 1924. This included members of my family and other people like Sammy Smith, known to everyone as 'Old Uncle', who used to camp around the lake.

In the old days when the Redfern Fish Market was started, fishermen in winter months were unable to catch fish and went to other work or duck shooting, which was legal, and ducks were sent to the fish markets to be sold. As large areas of weed existed, ducks were plentiful, especially in Budgewoi Lake, Tumbi Umbi, Wyong Bay, Big Bay and also Dark Corner.

Power Stations affect prawning

29 May 1984; The condition of the lakes now for several years has been ideal for greasyback prawns which used to spawn mainly in Lake Munmorah before the Power Station started operations. Now no good catches since. Also the good catches of bream in the Lake by meshing net from 1954 to 1967 is a thing of the past.

Any lakes, rivers etc of salt water should not have Power Stations receiving cooling water or discharging into it destroying fish and prawning grounds. Low lying lands, swamps etc, should be dredged out for Power Station at Chittaway as there is a large area of these from South Tacoma to Chittaway to hold sufficient water for cooling purposes.

Floods and their effect on Entrance Channel

8 November 1984; - Mini flood

27 January 1985; I went around to the entrance channel to see how much the sand had increased in the last year despite the dredging by Wyong Shire Council and a minor flood. If positive steps are not taken a bleak future is in store for residents, tourist industry, fishermen, etc. At present the sand bar is only a couple of feet deep. Needs a series of floods similar to the 1949 and 1954 floods, or alternately a break wall, something of 8 feet deep.

Prawns caught at Munmorah Power Station

23 February 1985; So many prawns were being taken off the screens at the Power Station by employees that the Fisheries Department set up a ballot to decide which local fishermen could use a set net in the inlet canal. Many large catches of prawns were made in the canal. However, the small prawns still go into the Power Station, as does the spawn of the greasyback prawn and garfish eggs, all of which gets killed in the hot water.

Prawning season 1984/85

3 March 1985; The prawns this season were school and king prawns of good size and fetching high prices. Fishermen working long hours are making a reasonable living. Most varieties of fish are scarce due to the poor entrance to the sea. Both fish and prawns will continue to decline until a large flood of dredging increases the tidal flow from the sea.

A permanent entrance will prevent floods and improve fishing

22 February 1986; Since the last major flood in 1954 many homes have been built around the 3 lakes of Tuggerah in flood prone areas, a repeat of the major flood could put floodwaters into several hundred homes. A permanent entrance would reduce the flood height by cutting through the low rocks and use this rock for a sea wall. Any sea wall built on the north side would stop sand infilling the entrance. In the average seasons the Tuggerah Lakes can only support an entrance of 40-50 yards and 6-8 feet deep, but in the major flood season you need 200-300 yards to get the flood water away after which the entrance would return to 40-50 yards wide. The entrance as stated would enable the lake to have a variation of approximately 15 inches during the new moon period and the full moon period tide would be 4-6 inches above the normal height for a few days then would drop below normal in the period between new and full moon as was the case in the 1920 after a major flood in which a reasonable entrance was cut by outgoing floodwaters. Should a seawall be made, within a short period king prawns would be in good supply on the weed around the lake and as in the past it would be quite possible to fill a bucket in an hour or two. In the areas of the lake where there are sand flats such as south of Chittaway, Basket Bay and Tuggerawong, many homes are within 50 yards of the lake and people would like to have a boat but the water is too shallow, only 1-3 inches. They need another 6 inches to float the boat.

During the period of a new full moon that extra water would be there for a few days, then dry so the present foul load of rotten weed would be a thing of the past. In bygone years when there was a good entrance large quantities of fish was caught in these areas, mostly mullet, when the water rose around the moon changes. Now for many years they can only be fished when the lake level rises after heavy rain, when this occurs good catches of mullet are caught whilst the lake level is up. In the years when a good entrance was to be had, jewfish was to be had in good supply, the largest, 113 lbs was caught by Jack Newman, and many were caught at 50 lbs. The last large fish that I caught was in September 1953 being 54 lbs near Tumbi Creek.

Whilst there are large fish in the lakes, there are no sharks. Unlike Jewfish which like muddy water, sharks are used to clear sea water and would become sick in the lake water which becomes dirty after a strong winds blows and churns up the mud.

Permanent entrance will reduce weed problem

22 February 1986; In the period 1940-1953 people in Progress Association used to say fishermen using hauling nets killed the weed beds, in the 1980's they make out that there was never any weed in the lake until about 20 years ago.

With no permanent entrance, weed collects and decays turning into mud. With a permanent entrance the loose weed washes ashore at the high tide level, dries out and blows away with the wind. As the whole of the Tuggerah lake system is a natural sand shore except for a small area of rocks, once a permanent entrance is made any mud on the sandy areas will disappear with no decaying weed to keep it muddy, so it would be sandy again after a year of permanent entrance.

Closing of the Entrance channel

12 March 1986; While I was at Tuncurry in the late 30s, the entrance to Tuggerah Lakes blocked for approximately 2 years. There was a photo in the Advocate recently of it being opened on 25th April 1939 by Erina Shire Council. The main reason the entrance was often blocked in the 30's and early 40's was the strong north east winds which would bring the sand from the north entrance. Also in the 1920s, 30s and 40s flooding would occur, but since 1954 and the last major flood, only much smaller floods have occurred and these were not sufficient to prevent sand infilling the entrance.

19 June 1986; Lake closed from 9 June 1986, reopened 18 June 1986 by dozer, lake level 6 inches above normal.

17 July 1986; Lake entrance only a few yards wide, very shallow.

August 1986; The lake entrance opened again today by dozers. River 3 inches higher than when opened in October 17, 1985.

12 November 1986; Prawns so far this season very scarce and shall remain so until dredging of the entrance or large flood increases a depth to increase flow sufficient to bring in increased spawn. It will also improve the lake.

Effect of Entrance channel on weed growth

18 January 1987; Lots of weed existed in Tuggerah Lakes until approximately 1938 when all weed and shell life died. The entrance was re-opened to the sea by Erina Shire Council 25 April 1939, but it was not until approximately 1953 that ribbon weed appeared, and 1954 that stackgrass and large hauls of fish and prawns were being caught as the weed increased. The weed was in all shallow areas of the lakes which was under 8 feet deep except where prawn hauling was being done by professional fishermen. In 1961 weed growth would prevent prawn hauling by the night nets. The prawn traps were used for a few weeks until 2 February 1962,

4. Further information from notebooks written in the 1980s and early 1990s

Brief History of Tuggerah Lakes Prawns (written on 29/4/84)

Large quantities of greasyback prawns used to be caught in Lake Munmorah before the first World War, but since there was very little demand for them at the time they were dried and sent to China and were known as 'Chowed Prawns'. The usual net was a hauling net of 1 inch mesh, and 100 fathom length. As nets were made of cotton they had to be tanned every 3 weeks. They were bought at $1\frac{1}{8}$ inch size and tanned down before use; they would shrink to 1 inch later. In the 1920's and 1930's considerable quantities of school and king prawns were captured using this net size, the legal length for prawns being 3 inches. In 1936, greasybacks were again present in Lake Munmorah but prices were very cheap, often not clearing expenses. The next appearance of these type of prawns was in 1942-43 and 1948, each cycle lasting several years.

In the early 1940s there was a drop in prawn production mainly due to the small entrance and the changing of species. Due to the entrance being closed, the species changed from school and king prawns to greasyback. When the entrance was re-opened and became a deep channel in the early 50s the school and king prawns returned and as the weed grew in the mid 50s the king prawns disappeared and were replaced by school prawns.

The prawn hauling net operated during dark periods of the moon from approximately 2 nights after full moon until 2 nights after new moon. It could only be used on a clean lake bottom which was clear of growing weeds, and most hauling was within 150 yards of the shore (where it was shallow enough to stand), two men per crew and up to 15 crew on the lake. In poor seasons there might be only 5 or 6 crews. The season started late September and finished at Xmas, only bait shop owners prawned longer, prawn fishermen went fishing during moon periods and for the rest of the year.

In 1952 the prawn size was increased to 4 inches and net size to $1\frac{1}{4}$ inch mesh and length 75 fathoms. Unable to catch prawns in commercial quantities fishermen had to go after fish or 'otter' trawl illegally. In 1953 the legal prawn size was reduced to 3.5 inches and a further concession was granted to fishermen by allowing a $1\frac{1}{8}$ inch mesh. Therefore they could once again catch reasonable quantities of prawns by hauling. In 1959 daylight prawning was made legal for the first time and the size limit on prawns was removed. In 1961 the prawn net size went back up to $1\frac{1}{4}$ inches. Illegal trawling became common again as it was difficult to catch prawns with a $1\frac{1}{4}$ inch net when hauling by hand. In 1962 the use of a running net was allowed for the first time in Tuggerah Lakes, and this allowed prawns to be caught with a $1\frac{1}{4}$ inch mesh. The next development was in 1966 when fishermen were permitted to use launches to pull 'snigger' nets, their correct name being trawl nets.

In 1967, just before Munmorah Power Station started operation large numbers of greasyback were being caught in Budgewoi Lake, probably originating from Munmorah. They soon shifted to the main (Tuggerah) lake where large hauls were made. Greasybacks favour a completely closed or very small entrance to the sea whereas school and king prawns spawn at sea and need a large entrance to bring in the spawn.

A further note about prawning and weed control

When weed was in the Tuggerah Lake, fishermen prawning the shallows had to rake up drift weed. Prawnning was done by hauling a net 150 yards long, $1\frac{1}{8}$ inch mesh (tanned to 1 inch) and the legal prawn size was 3 inches. In 1961 Fisheries Department rose the size of the mesh to $1\frac{1}{4}$ inch mesh. Unable to catch prawns in commercial quantity with this size mesh, fishermen had to leave the shallow areas (0-4 feet deep) for deeper water (4-11 feet deep) and use a running net

instead of a hauling net. Within 5 months the shallow areas became weedy again and decaying weed turned into soft mud and then into green algae.

Selling undersized fish

Regarding small fish in the early days although the size of bream was 9 inches, after the bream travelling season there would be very few bream left in the lake and what was there was small. Some time fish agents unable to get supplies, approached fishermen to send a few cases of bream just undersized, a cross or some mark on the box which would not be opened if any Fisheries Inspector was about.

In 1952 most fishermen left the lakes since they were unable to catch legal fish with the nets they had. Large quantities of undersized fish were sold direct to buyers who then sold them to fish shops etc. The Chief Secretary sent an Inspector, who had some success with duck shooters inland, to clean up the fishermen selling undersized fish. This Inspector instead became a companion of one of the ringleaders and therefore started this mess of corruption.

Lake Munmorah – fishing and prawning

From 1936 large quantities of greasyback prawns bred in Lake Munmorah, and from 1953 good quantities of bream, luderick and mullet were caught with meshing nets. This lake was closed to hauling nets about 1952. After the start of operation of the Power Station in 1967, there were big falls in fish and prawns in this area, so most fishermen wouldn't go there as often since catches would be small compared with the catches before 1967.

Differences between hauling and trawling for prawns

I'd now like to explain the difference between hauling and trawling. If a net is dragged from a moving launch, it is called trawling, but if the net is run out, the launch stopped and anchored, and the net is pulled in by hand or by winch it is called hauling. However, if the motors are started, put into gear and moved forward to pull the net, it is trawling. Since the end of 1966 no prawn hauling had been done by professional fishermen that I know of. The motors in launches which used to be 6-7 hp are now mostly from 20hp to 30hp, some developing 200hp. The launches now pull the net through the water until it closes together and the prawns are in the 'pocket' of the net. The motor is stopped and the ropes pulled into the launch, and any prawns in the pocket are put into containers. The net is then ready for another 'shot' or trawl if the prawns are in a payable quantity. (One fisherman can do this alone yet it would take at least two fishermen to pull set nets by hauling and would finish the day with few prawns but plenty of blisters on the hands.) This trawling is mostly done in the deep water with muddy bottom, the lead line carrying lots of lead so that it drags through the mud on the bottom.

The hauling net

From 1920 to 1953 the hauling net for fish was generally 1100 yards long with 1100 yards of rope at each end. In the spring and summer months luderick would be the main fish caught if there was a good supply of stack grass and clean ribbon weed. A catch of ten cases of luderick, 2 of bream, 1 of tailor and 1 mixed case of flathead and leatherjacket was considered a fair haul. A catch of 40 cases of luderick, 6 of bream, and 4 mixed was considered a good haul. Usually there would be four men working each net. The fish are spread fairly evenly over the lake during spring and summer, but towards April the fish would gradually leave some areas and congregate in the middle of the lake. These fish would stir up the mud on the bottom causing a brown patch in the water. There could be up to 400 cases of fish, mainly bream, in an area 1 mile long and ½ mile wide. To catch these fish, 2 nets would be joined together (making 2200 yards of net) and the eight men could make a haul of up to 200 cases of bream. Many of these fish would only be about 9 inches long and were in such quantity that they would sell at low prices. Men on a share would only receive a few pounds wage. The joining of the two nets was called 'double-heading'.

In 1953 nylon nets became available, so bream could be caught in mesh nets (3 ¾ inch or 4 inch mesh) by the methods of setting or meshing. These methods allowed the bream to be caught earlier in the season when they were still spread out all over the lake and meant that the bream never got the chance to congregate into a mud patch in the middle of the lake any more. A larger number of fishermen now got a share of the fish over a much larger area of the lake, and two cases of bream would be considered fair, while 4 cases was considered a good catch. This sharing of the catch meant that since 1953 most fishermen could earn a good wage. The introduction of meshing and setting for bream using nylon nets also meant that the total catch of bream was greater than when the large hauls were made in the 1920s, 30s and 40s.

Processing and selling prawns

In the early days, until the early 1920s, most prawns caught in Tuggerah Lakes were cooked on the beach and then dried in the sun for 2 or 3 days until the head became brittle. They were then put in a sack, hit over a log to break up the heads and then sieved to get rid of all the dust. 60 pounds of prawns would end up as about 10 pounds of 'chowed' prawns, which were bought by the Chinese.

In the 1930s prawns were sent to Newcastle on the morning train. A buyer would be found for 2 cases on Monday, 2 on Wednesday and another 2 on Saturday, each case weighing 60 pounds and obtaining a price of £1 per case. From November onwards the prawns from the Myall Lakes would also come onto the market and the price would drop to 12 shillings 6 pence per case. Should a larger catch, of say 20 cases, be made, these would be split up between 4 or 5 agents at the Sydney markets, and some of these might go into cold storage. Fishermen might only receive 2 shillings or less per case for these and 6 shillings per case was considered a good price.

More notes on fishermen's wages

In the years until 1943 fishermen in estuaries along the coast paid no income tax as earnings per week amounted from a few shillings to a few pounds. After buying gear the year's earnings would be much less than a labourer who earned about £3 for a 48 hour week. In February 1943 the Taxation Dept, made an inquiry into this and as a result some fishermen had to pay 2 or 3 pounds per year. In the late 40s many fishermen often would not clear expenses in the Sydney Fish Markets, so large quantity of fish, prawns etc. sold direct to buyers, cash in hand, no records. This would allow fishermen to exist, but still be under a labourers wage and would be unable to have a banking account if married with wife and children to support.

Recommendation for breakwall at The Entrance (written in early 1990s)

My suggestions for the future are that Wyong Shire Council should bring the condition of Tuggerah Lakes back to what it was from 1920 to 1939. The North Entrance channel near the bridge should be closed. Next dredge the South Natural Channel 8 to 10 ft deep to the rocks, 100 metres wide and let nature clean the algae from the lakes. The present 'restoration' and so called 'navigation' channels have been inadequate, inappropriate and often disasters. The next step I would take is to build a breakwall along the south side of the entrance, extending from the existing breakwall and heading out to sea for 100 metres in a south-east direction. Another breakwall would be constructed on the north side, extending out 300 metres, to hold back the sand.

My ideas would result in a clean healthy lake with a minimum of dredging as is the case with Wallis Lake and coastal tidal rivers such as the Hastings and Manning.

Dredging of north channel past Terilbah Island

There was no deep channel past Terilbah Island to the lake until the Wyong Council dredged it in about 1960. People used to be able to walk to Terilbah Island dry footed at low tide from North Entrance. Dredging this north channel caused the south channels at the Entrance to silt up.

Part B: Interviews with Arthur and Michael Clouten

(This information was obtained from interviews in May 1998 with Arthur and his grandson, Michael, who is currently working as a professional fisherman on Tuggerah Lakes.)

1. First Interview

interview held on 14/5/98 at 16 Wolesley Ave, Tacoma.

Introduction

Arthur: (reading from a letter he wrote for me on 12/5/98 in reply to my request for info in the local newspaper)

I refer to the article in the local newspaper dated 6/5/98 requesting information with regards the Tuggerah Lakes system.

In the period 1900 to 1940 the weed, mud etc the same but much more fish caught, because there were twice as many fishermen. In 1938 the entrance to the sea blocked. So no sea water and all weed and shell life died by 1941. The lake foreshore became hard sand, fish became very scarce and fishermen had to catch under size fish to exist or go to other estuaries. The weed and shell life started to return in 1953 and by 1955 some silt appeared and there were large catches of fish and prawns and prices were also much higher so fishermen had a good outlook, a bright future.

By 1980 the weed position got less so fish got less. But fish and prawn prices went sky high most weeks so fishermen earning good.

The colour of the water is approximately the same. Rain water coming down the creeks and wind created currents which disturb the silt. Also fish and prawn feeding does the same (*discolours the water*).

A basket of fish

Interviewer: How many pounds of fish in a basket?

Arthur: 60 pounds.

Water clarity - muddiness due to wind and also prawns/fish

Interviewer: Tell me more about the colour of the water and how it changes.

Arthur: The colour of the water, is approximately the same as it has always been. When it rains and the water comes down, if you get big floods, for three weeks it's dirty. If you went out into the lake now the water would be fairly green (clear). Say in an hours time it starts to blow, within half an hour the underwater current starts. If you didn't have a current, when a southerly blew one end would be deep and the other shallow. So when it starts for about half an hour the tide rises and then it starts to go back by an underwater current. Out in the lake once you get off the flats it is all soft mud. And the underwater current churns it up. You could go out there when it is calm and there has been no rain for a while, and what a beautiful sight, how green it looks. Then the wind comes up and in an hour you see it is all dirty.

Now people have been told that it has only occurred since the houses were built. But that has been there for thousands of years. Also, when there's no wind and you go out in the summertime,

right across the lake and around the lake it is a beautiful green (or clear). You then go to shore, boil the billy, have a cup of tea, and then you look out again and a patch is coloured. You had been there an hour before and it was clear but now it is colour because the prawns are coming out and they stir it up.

The effect of the entrance channel on weed and fish

Arthur; You need a big entrance and tonnes of weeds and then your catch goes up. (*Arthur is now reading sections from one of his diaries*) It was in 1938 that the entrance to the sea was blocked off. Now the weed in the lakes are salt water weeds. Not only did the weed die but all the shell life died too.

Interviewer: Did they die because there was no salt water getting into the lake?

Arthur: Yes, it was freshwater. (*referring to diary again*) The water became too fresh and killed the weed and all the millions of shellfish. The last bit of weed in the lake was January '41. The lake foreshore became hard sand, it only took about 3 months. You wouldn't even leave your footprints in the sand. Fish became very scarce and fisherman had to catch undersize fish to exist or go to other estuaries. I spent most of my time in that period, at the Manning River & Forster. The weed started to come back in 1953 and by 1955 there was some very good weed, and some silt started to return, and large catches of fish & prawns.

By 1980 the weed position got less so the fish got less. When they say there is weed here it is only about a tenth. I knocked off in 80 and there wasn't enough weed in the lake then. The main weed for fish is what they call 'stack weed'. The other one is 'ribbon weed'. The ribbon weed used to feed the fish but gives no shelter. The young fish came to the shallow water, and the pelicans and shags would eat them all, so you would never get lots of fish until you have stackweed. Now the stackweed is like a blackberry vine, it came to the top of the water, and they couldn't eat the small ones, so fish was plentiful.

Now fish and prawn prices went sky high. From about a penny a pound for prawns in the thirties, they went up to \$12 a kilo. When I knocked off in 1980 I was getting \$9 a kilo. In the 1930s the fish price was low - if you earned a 100 pounds for the year you did well. If you got 150 you did extra well. You paid no income tax.

Interviewer: You mentioned by 1980, the weed position got less. Was that all types of weed?

Arthur: The main one was the stackweed. It is almost non existent now, but the grandson Michael next door, he says the 'stack weed' is growing up in top lake. They have got some black fish and bream in this last 2 or 3 weeks. 9 or 10 cases. That is really good. But other places, there is no niggers around there.

Interviewer: That is because there is not much 'stack weed' about?

Arthur: Yes.

Arthur: I will show you this map. (*Arthur showing interviewer his sketch map- see figure2 in this report*). That is Chittaway Creek there, that dark there is 'stack weed'. The stack weed went out 500 metres and the ribbon weed was beyond that. This is when I started in the 1920s.

Interviewer: You have got on the map that this is representative of 1924 to 1935. The dark shading is 'stack weed'. So from Chittaway Point right across - halfway between The Entrance and Long Jetty was all stackweed.

Arthur: It was the same in the 1880s, Bill Clifford told me about that. The depth of the water out there is all about 7 foot so it can grow there. And the same thing happened in 1961. But it only lasts about 4 years then there is scarcity.

Prawning and the effect of hauling on the weed

Arthur: You will see all this here (looking at the map), they are prawn hauls.

Interviewer: So that's south of Long Jetty.

Arthur: Between Long Jetty and Watkins Jetty, a few hundred yards there, the fishermen are not allowed, it is for tourists. But from Watkins Jetty to Parry's jetty and all around there is OK.

Interviewer: So that was good for prawns there?

Arthur: Oh yes, you run your net out and then you dragged it in slow, you did that up to 25 times a night so no weeds would grow there. And any drift weed that comes across, you rake it up and when it dries you put a match to it. Up here (pointing on map) past North Entrance, that is another place we prawned and we kept that all the time clean. We'd haul the nets up to 20 times a night, and half a dozen boats would be working that. Canton Beach was the same, we used to haul it, and it was all clear.

Interviewer: So on Canton Beach the weed would be hauled up and then burnt to get rid of it?

Arthur: Yes, it can't grow while you're working there.

Prawn net sizes and the return of stackweed in 1961

Arthur: Now in 1961, the Fisheries Department wanted to rise the prawn net size up. They were told by Dr Racek, a university person, that nets should be a bigger mesh but there should be no size limit on the prawns. Prawns had a size limit of 3½ inches at the time. So they took the size off and said you can no longer use a 1⅛ inch mesh but must use 1¼ inch. Well you can't catch any prawns with that! So we knocked off, we stopped prawning. Five months later, large areas of the lake (pointing on map) was all stack weed.

Interviewer: So even at Canton Beach and along eastern side of Tuggerah Lake, the weed came back.

Arthur: Yes all this became weed again because the weed is natural, in the old time it was weed.

Interviewer: (now looking at map of Budgewoi Lake) So this is Budgewoi Lake.

Arthur: The same thing in this lake, all this area was stack weed, all over there stack, all up along here is stack, and all the rest was ribbon weed. All along from the co-op up there, right up to Charmhaven you couldn't go ashore because of the weed and mud. To get ashore anywhere you had to go where there were rocks.

Interviewer: Was it like that in the 20 and 30s also?

Arthur: Yes, then it all died. It all went in the same time as the weed in Bottom Lake died. From 1938 to 1941. It started to die at '38 and finished at '41.

Weed and fishing in Budgewoi lake

Arthur: This lake here used to support 5 hauling nets in the summertime. To stop the net from cabling up you would put pegs along the net (*the bottom rope of the net would rise over weedbeds*)

and get twisted with the top net, so they would place wooden stakes along the net to stop this). The shore was mud so they'd land the fish outside the mud, and you would get 40 cases of niggers (*blackfish*) and that. The next day you would do the same. As soon as all the weed left, the fish left, so they closed it (to hauling), all fished out. Starved out, the fish was.

Weed in Munmorah Lake

Arthur: This lake here, (*pointing to Munmorah Lake*), it was always clean, but the older blokes said there used to be a lot of weed. But all this area here (*middle of Munmorah Lake*) is too deep for weed, you see weed won't grow without light. Lake Macquarie is the deepest salt water lake in NSW. This is the second one. Now all around the edges is becoming weed again. Michael now tells me where the weed is and where he's getting the niggers from.

(Michael - Arthur's grandson arrives.)

Stackweed

Interviewer: We are talking about the stackweed in the top lake. Where is the stack in top lake at the moment?

Michael: The stack is around the shore. And there is a bit also in Wyong Bay now. This is probably the most stack since I started fishing in 1981.

Interviewer: I gather that stack is better for the fish. Arthur was saying.

Michael: Pop thinks it is. I don't know, I have never really had that much of it. There is a bit of stack in Wyong Bay. Not a lot, and only in close, only near the shore.

Entrance Channel

Arthur: When the channel is deep the flood tide comes past Pelican Island, it goes past Long Jetty and it would be 2 miles up the lake, on the flood tide. And the water would be green (clear) even when the wind blows because the tide was stronger than the wind current. It would shove all the dirty water up the lake and to the side. As soon as the tide went back the dirty water would come back. And you'd get a rise and fall in tide even at Long Jetty of 3-4 inches.

Michael: There have been some reasonable sized channels since I've been here and I don't think it makes much difference to the tide. It was about 10 foot deep about 6 years ago when they first started doing all that dredging work. But when they made it deep all that was left was rock and we were ripping our nets on the rock. This was at the Entrance, down below the boat ramp. We put our prawn nets in there. But when the channel gets deep and all the sand goes, all that's left is rock. You have to try and drive steel pegs through rock.

The effect of a breakwall

Interviewer: Do you feel a breakwater at the entrance would help keep the entrance open?

Arthur: Yes, it's got to be open and it would help get rid of all this algae and rotten moss weed.

Interviewer: So keeping the lake entrance open would help?

Arthur: Yes, it has got to be opened. The breakwall is the only thing to keep them opened.

Interviewer: What about in the natural situation. Many hundreds of years ago the entrance would often close for a few years. Do you think that was good or bad?

Arthur: You have got to have them opened all the time.

Interviewer: If the entrance is kept open does that help the weed grow, or not?

Arthur: No, you see that map (*referring to map showing stackweed growth*), that would be the pattern, you still have the stack weed. But you don't get this stuff, the ribbon weed that comes to shore, if there was a rise & fall, that stuff wouldn't be there it would be up on the land and it would dry out. That is what happens at Forster because of the breakwall.

Michael: What he's saying is the ribbon weed dies off and also the swans pull it out, and because there is no rise & fall in the lake at all, it just gets blown onto the very edge of the lake and just sits there and rots. Then it just turns to mud or silt and the nutrients are there. If you have got a better channel, you have got a rise and fall over the mud, you might have a difference in the tide of say 6 inches. When it is right up on the high it covers the mud and the weed blows ashore. And six inches in the tide might be 10 foot on the actual land, so it dries out and blows away and just breaks up quick. You wouldn't get the mud so much, you'd get more sand.

Algae, slime and wool

Interviewer: One thing I am interested in is the difference between the stack weed and the ribbon weed which is good for the fish, compared with the algae, the slime & the wool.

Michael: Oh we get fish in the algae too. We haven't had any red wool for a few years now. It can grow in quite deep water, not just along the edges.

Interviewer: What about the green slime?

Michael: Generally the green slime comes first, then it sort of turns into red. We have got a feeling it is the one thing. The red and the green stuff generally grow more in the winter time. This lake in the summer time, because it is only shallow and the bottom is muddy, the winds in summer makes the water too muddy. So the algae growing on the bottom can't get the sunshine. The ribbon weed, it can still grow because it can grow up (towards the surface for light). And the ribbon weed is mainly only in the shallow water. There is not much weed that ever grows in the deep water as a rule.

When the winter time comes, from this time on, the lake gets clearer & clearer because you have less wind, the water is colder, and the fish don't swim around as much. The lake gets clearer and clearer. If you go out right in the middle of winter, you can see the bottom. Most of the lake is only about 10 foot anyway. You can see the shells on the bottom. That is when the sunlight must get in and then you get the green wool and red wool. You get it any time about now. When you get into the winter it will be there. Then when you get into the spring it will be there. When it starts to get into summer it generally always dies off, by about Christmas. But for the last few years it hasn't been there.

The effect of the lakes restoration project on prawns and fish

Michael: For the last few years we haven't had any ocean prawns - school prawns and king prawns.

Michael: When the council did that dredging. About late 1989 they first started at Long Jetty - we call it Taylor's. And by middle '90 they went berserk, they went all around to Chittaway and they started doing Canton, and people were complaining. Pat Clifford was complaining. They killed all the little fish and the seagulls had a picnic. They went right out towards the 'steps' and put these big dam walls in. Then they pushed whatever was in it and pushed it up on the shore. As far as we were concerned all they have done is reclaim more land for themselves.

Interviewer: Yes, You can see fifty metres of reclaimed land in places.

Michael: And when they done it they didn't go around and level it off (in the water). It went from 9 foot of water to a few inches! Because we have got a hauling net a kilometre long, and we have a kilometre of rope, you have got to land it up on the shallow water. Well it wiped us out on 3 parts of Tumbi because there was no where you could land. The water went from 9 feet to so shallow we couldn't land the boat!

Interviewer: I presume it also wiped out the weed beds?

Michael: Yes, it wiped them out. Now for some reason the weed in the entire lake, even Munmorah because they did a bit of work up there too, the ribbon weed, all weed, for about a year and a half wasn't in the lake. There was not one blade of weed in the entire lake.

The weed then came back and has now been back for a few years. But the fish are not back. Before they did all this work we were going out and getting a boat load of mullet. Two or three times a night. A ton of fish, we've got the records to show it. Now we usually don't bother catching mullet because there isn't alot of money in it. And there was a lot of blackfish too. And lots of other types of fish too. Then the weed disappeared and a year after it went the black fish were so skinny, they starved. So they went out to sea. And this year is the first year there have been black fish of any quantity.

Interviewer: What about bream and flathead? What happened to them in the last few years?

Michael: The flathead doesn't rely on the weed. He only catches small fish and small prawns.

Interviewer: So how did he cope?

Michael: Last year and this year he hasn't been as good as he should have been. The others years he wasn't too bad. He doesn't seem to be affected as much. They haven't been there like other years, but that could be a seasonal thing too. You'd have to check the records at the Co-op. But the mullet and the blackfish were definitely affected in a big way. The mullet are nowhere near like they were. But from what you can hear, the mullet are not anywhere on the coast.

Interviewer: So it could be coastal thing as well?

Michael: Yes, that might be slightly different but for the blackfish it was definitely a weed thing. This is also the first year you have seen any quantity of small mullet. You can go out there now, and you will see big quantities of small mullet 5 or 6 inches, the little flat-tailed mullet. There's a lot of small bream in the lake now too. Now bream is one thing I always go for, and this year we have hardly caught any bream in this lake.

Interviewer: What about in the last 3 or 4 years?

Michael: Last year me and my mate, we got a lot of bream early but not later. And they were 'medium' bream. We are talking bream like 11 inches or 12 inches long. This is what has happened. Geoff Allen, the NSW Fisheries bloke, he told me it takes 5 or 6 years for a bream to grow to its legal size. If you wiped out the weed in '91 there would have been no small fish for the next few years, you have wiped out a 2 year cycle of small bream. Last year the bream that you mainly got were nearly all 'medium' bream (presumably bred before the weed beds died off). What we call medium bream are over about 28 cms, and legal size is 25. Probably ½ to ¾ of the bream I caught were 'medium' bream. Now normally when we get bream of any quantity in this lake, they are generally bream that are just nicely over his legal size, about 26 cm. But the bream just haven't been here in any quantity, they haven't been here for a few years.

Interviewer: What about the prawns? How have they been since they did the dredging.

Michael: When they first started doing the dredging we were getting good quantities of prawns. And then in the next few years they dropped right off. In 1994-95 I hardly bothered to go prawning. There wasn't enough to even bother. We went 8 days for the whole year. In about March-April 95 we got a few kingies, no school prawns, only king prawns. They must have come in late that year, because at Xmas time you would only get little tiny ones.

Interviewer: So that was 1994-95. Are they coming back slowly now?

Michael; This year there was a lot of greasybacks. The first month we got them they weren't too bad in size. But after the first month they just didn't seem to grow. We got plenty of them but they were tiny. Now last year there was a good lot of greasybacks, of reasonable size, and at the end of last year around March - April we got a few school prawns. But from then back we haven't had enough prawns to worry about.

Crabs in recent years

Michael: You might have heard about crabs in the lake. There is blue swimmer crabs in the lake. When they done all the dredging and put the bigger channel in there, about 1992 or 93 we started to get a lot of sand whiting. And then we started to get alot of blue swimmer crabs. We were getting a ton of sand whiting in the bigger hauling net (the one that takes four of us to use) and we were getting half a ton of blue swimmer crabs as well.

Now if I had went back through all the years before 1992 - 93, I wouldn't have had a 100 kilo of blue swimmer crabs out of this lake all up. You couldn't get enough crabs to get a feed previously.

Interviewer: So they are just coming in because the channel has been enlarged

Michael: It would have to be because of the more salt. The bigger channel you get more salt.

Arthur: In the 20s and 30s you might get the odd mud crab

Michael; There has been a few more mud crabs this year too. This is the most mud crabs we've had for a while too.

Arthur; That's because you don't have the quantity of weed at the moment.

A deep channel

Interviewer: What I am interested in hearing about - if the channel is permanently open, what affect that will have on the lake, compared with how it was back in the thirties & forties where it would block off every few years, then it would flood and open up again.

Michael: Well the more open the channel is the more salty it is and the more fish you'll get and the more blue swimmer crabs you'll get too.

Arthur: You see when they have a good entrance the jewfish would come into the lakes in big quantities but they haven't been there for years because the entrance is too small.

Comparing fish catches

Michael; It is hard to compare the amount of fish caught 50 or 80 years ago with what we catch because we have different methods, and different nets, lots of things are different.

Swans

Interviewer: Arthur, do you remember lots of swans on the lake back in the 1920's & 30's

Arthur: Yes, in the 1920's at least a thousand, to fifteen hundred. They were near Tumbi, and Wyong Bay and all along different parts of the lake, and Middle Lake & Top Lake also.

Interviewer: Would you see them breeding.

Arthur: No they go away and breed. Now and again they would breed here.

Interviewer: Would they ever breed in the swamps near the racecourse, all the wetlands in there?

Arthur: Now and again they might. But mostly they went inland.

Lakes Restoration Project

Michael: (looking at newspaper article of fish trapped by bund walls at Canton Beach during the dredging operation as part of the Lakes Restoration Project) This is at Canton Beach in 1993. That is what they trapped. They came and talked to the fisherman, because they knew they had the fish caught behind the big wall. They wanted to know if we could go in and catch them. Amateurs went in there with 20 foot nets to catch some of them. It was a big area, but they didn't think they would get this many fish. There were eels and all types of fish. They reckon there were three truck loads, thirty thousand fish carted away.

Interviewer: When they dug this out at Canton Beach, they must have removed all the weed and all the animals that would have been in the surface layer.

Michael: Yes in the top layer. The weed was only gone for a year and a half, and then it came back. The weed has been back thick now for 4 years, back as thick as ever. But the fish haven't come back. The smaller animals, the plankton and the algae that's what the fish need. Now the weed might have come back but how long before the other things come back? This year is the first year there has been any great quantity of algae for the fish to feed on.

Floods

Arthur: (looking at photos of floods) In the early fifties we had 4 big floods. When you get the floods you get a big entrance. In 1949 there was a big flood, it came up to the second step at the back of my house. There were big floods in 1927 and 1929 too. When I built this house, I allowed 1 foot higher than what those floods went to. There were big floods in 1953 and 1954 too.

Canton Beach and weed

Arthur; (looking at a photo of Canton beach in the 30s) There was no weed on the beach because they never stopped hauling there, they were hauling all the time. But the weed used to finish up there (pointing above the water line on the sand) and as soon as you got a southerly, the weed when it was dry, would be blown into the bush. That's what used to happen.

Stackweed

Michael: I have been working up the Myall lakes, it is nowhere near as salty as this lake. Yet it has got a lot of stack weed in it at the moment.

Changes in weeds over the years

Interviewer: Arthur, what changes have you seen in Tuggerah lakes over the last 50 or 60 years. In terms of the weeds?

Arthur: The weed is less than it used to be.

Michael: In my time (from 1980-81) there has always been weed, some years there's been more than others. And it has mostly been ribbon weed. Pop used to write where the weed was and how far it came out, and record the year (looking at some of Arthur's sketch maps of the weed). See this map, he's drawn the weed right out from Tumbi, now it has never been that far out in my time.

Interviewer: So the weed was out from Tumbi about 800 metres?

Michael: More! There's Chittaway Point. It is almost as far out as a line between Chittaway Point and The Entrance. Well the bloke I used to work with, Jobbo, who was Pop's brother in-law, he told me that in one year, some time in the 60s, that the whole southern part of Tuggerah Lake was stackweed. The deepest part of that area is 9 foot, but much of it is shallower, about 6 foot deep, so the weed can grow there.

Interviewer: Yes Arthur has drawn it in his map here and said it was in 1962-64.

Michael: But in my time, from 1980-81 onwards, the weed has nearly only ever been in the shallow water. Where the lake is only 5 foot deep, it sometimes grows up to a kilometre out from the shore. At Wyong Bay the weed was a long way out when I took John Bell (not the first John Bell the second John Bell that came here) out to look at the lake, that was probably in 1995. You see the weed was only gone for about 18 months after they did all their work along the shores but when it came back it just went crazy and grew very thick. At Long Jetty where they first did the work, before they even finished, the weed had come back really thick. And then for some reason, acid sulphate soil or whatever it was I don't know, the weed just died in the entire lake.

Acid Sulphate soils

Interviewer: That is another issue that no one else has talked about. The acid sulphate soil.

Michael: They tell me they put 100 ton of lime along Killarney Vale. And yet they claim that the acid sulphate wasn't a problem and didn't kill the weed. Well if the acid sulphate isn't a problem why are they putting so much lime down?

Changes in Weed over the years

Arthur: (looking at another sketch map) From 1939-54 that was what the weed in the lake was like. A little bit of ribbon weed but no stackweed. And that is when there were no fish and prawns in the lake too.

In 1958 there was stackweed in the lake again. By 1962 this map shows the stackweed right across from Chittaway, and Budgewoi was full of stackweed too. The stackweed was to the top of the water and you could not use a hauling net so we used a meshing net in between the weed. But the top lake was bare at that time.

Fish and effects of lakes restoration project

Michael: Before they did all this dredging (in the early 90s) the fish were the same all the time. You did get little variations but the quantity of fish was pretty consistent. The main change I've seen is when they did the dredging. After they dredged the channel at the Entrance, we got lots of whiting for about 3 years in big quantities. Before that we used to get a few now and again but not like that. If it hadn't been for the good numbers of sand whiting and blue swimmer crabs the fishermen would have done it hard, that's what took us through.

Power station; effect on prawns and fish

Interviewer: What affect did the power station have on the lakes?

Arthur: We used to get a lot of greasyback prawns in the lakes. The school and king prawns breed at sea and the spawn comes back in, but the greasybacks breed in the lakes. Before the power station we used to get cycles of them. You got plenty of prawns. Then they put the power station in. The spawn goes through and is cooked there and we got no greasybacks. The power station is off now and the greasybacks are coming back. This year we had the most in years and years.

Michael: This year I got 17 boxes in one go. Over 300 kilo. That was probably the best single catch I had. Others got 40 boxes but that was more than one bloke.

Interviewer: So the power station affected the prawns?

Michael: From what I have been told, they used to get a lot of prawns in middle lake and top lake. Since the power station has been there, no prawns. They used to get a few at the inlet that were getting sucked into the power station. But that is it. And out in the lake there hasn't been enough prawns to make it worth prawning. Every now and again someone would go up there, some blokes from Lake Macquarie would get a few kilos, a box or couple of boxes for a couple of weeks. But there hasn't been prawns for any quantity to really worry about, except for the ones that got sucked down the channel to the Power Station.

The Power Station has been turned off a lot now and the greasybacks have come back. A coincidence or not?

Arthur; Before they put the power station in, me and Jobbo could go up there and get 10 boxes of bream in a night just where they put the inlet channel in. After they got it going you couldn't do that.

New weeds in Lake Munmorah

Interviewer: The power station also increases the temperature of the lake. How does that affect the fish or the weed?

Arthur: Everyone reckoned the warm water would make the weed grow, but there is less. The weed is only around the shore now. What's the weed like up there in middle lake now?

Michael: The weed is mainly on the shore, a little bit grows over the steps. Actually, since the lake has got saltier we have different weed in the lake now. In Top Lake (Munmorah) there is like a red stuff and it stinks. It is a slimy sort of stuff. It is out on the bottom but it is right over the lot. Out in the deep and everywhere. Just like the slime red wool we used to get, but it doesn't stick to the net.

Michael: Cabbage weed is another type of weed we have in the lake at the moment. They used to get a lot of it in Lake Macquarie. The cabbage weed has come back, its increased. There is a little bit around Wyong Bay, Middle Lake, a bit in Top Lake. Wyongah and Tuggerawong & all along there in the shallow, right in close. The only place you ever used to see it was a little bit 'under the mountains', which is what we call San Remo.

Interviewer: So the other one was this red slime that has not been seen before.

Michael: No-one knew what it was, but one old bloke said, 'oh yeah we did have that years ago'.

Interviewer: So it's been about in small amounts before.

Michael: Well I have never seen this red purpley stuff before, it stinks.

Interviewer: That is an important point, just in terms of keeping the channel open and what effects it will have on the types of weed.

Dredging of northern channel past Terilbah Island

Michael: At the north entrance, where they have the north entrance coming out past where the old co-op was, that heads up towards Canton Beach. When I first started there was no channel there, there was only like a little tiny drain. If you didn't know where it was you wouldn't get in there. There used to be a couple of fisherman used to go in there.

Background to Michael's fishing career

Me & Jobbo (Herb Jobson, who died a couple of years ago) used to fish together. Since April 1981 I worked with him. When I first left school in November 1980 I came down here to start fishing. Pop and Bruce were night prawning and I went out with them, and they were both teaching me how to fish. But then Bruce died in April 1981, so then Jobbo needed someone to go hauling so I went with him. So it became me and Jobbo and a couple of other blokes. Well me and Dave and Bradley, we still have got the hauling net today.

Night prawning on the flats where the northern channel enters the lake

Michael: Me & Jobbo were night prawning, and night prawning is different to day prawning. It is a different net, that is when the prawns travel along the eastern side of the lake to go to sea. They travel up and down along the shallow water or just along the steps. Just to the side of the north channel where they have put that new big channel, we used to night prawn there. This would have been the late eighties. About 1985 or '86 would have been when we first went there. We started going there and for a couple of years we were getting a lot of prawns. No-one else was coming there, eventually we had to put a peg in to say it was our spot. Other people used to go other places, further up the east side of the lake. We were getting as many night prawns there as probably anywhere in the lake.

Then in 1990 Jobbo didn't want to do any more night prawning (because he was getting a bit old). So I went with young Steve Neilson, a bloke I am working with now. We were there in 1989-90 and about 1991 when they put the channel through and the currents changed. No prawns are caught there now. The currents have changed. No-one prawns there now. You know where I prawn, I prawn about 3 kilometres further up the lake now.

Interviewer: Do you get prawns now?

Michael: Yes, we get prawns there. This year we were there, during the first darks we got about 20 boxes of prawns. Half of them were 'king prawns' and half was 'greasyback prawns'.

Interviewer: A box is still 60 pounds is it?

Michael: 25 kilos sometimes 20 kilos. Other blokes got a few king prawns, one bloke got about 20 boxes of king prawns off Eel Haul Bay, (we call it Heeley). This would probably have been November, and that was the only prawns caught! We went out the next month, we got a few boxes, but they were mainly all little greasybacks.

Algae

Michael: (looking through Arthur's newspaper clippings) The algae stuff, we haven't been getting that the last few years.

Interviewer: When was the algae about a lot?

Michael: This article is from 1992, so it was around then. If I look through the years from when I caught different things, it might remind me.

Interviewer: Does the black fish like the algae?

Michael: I don't know if they go for the algae so much. But I know the ribbon weed, if you cut them open they have got ribbon weed in them. But I suppose they would eat algae.

Interviewer: I saw some newspaper articles from the late 70's where there was a lot of algae on Canton Beach. Do you remember that at all?

Michael: That is before my time. I know they were getting a lot of red wool before I started here because they all used to speak of it. The best ones to talk about the red wool is mainly the haulers, because you go out and you haul it in and know where it is. In the eighties we used to get a lot of it. Sometimes you would nearly have to stop work for it, because you couldn't get your net in.

Interviewer: Any particular point in the lake where it was really bad?

Michael: You might get it on Chittaway say, and then it might be somewhere else and then eventually it just grows and then all of a sudden it just grows and its everywhere. Then you might find for some reason there might be a little spot where it is not as thick and you can still get your net in.

Interviewer: So is it a problem to you then when there is a whole lot of algae?

Michael: It is when you are hauling because it makes it hard to catch the fish. But I will tell you now if there is a spot where the red wool is I will nearly bet that is where the fish will be and prawns.

Interviewer: So it is good for the fish but it can be harder to catch.

Michael: Yes. I've seen down in Tumbi the red wool there one year was there right up to Christmas, and we were getting school prawns and when the red wool left you couldn't get any prawns. The prawns left with it.

Michael: You get plenty of fish and plenty of prawns off it, but we haven't had that for quite a few years, we haven't had them prawns, so how much do they rely on it. You talk to any of the fisherman, we haven't had red wool for quite a few years and we haven't had any ocean prawns either.

Prawn trawling

Interviewer; (looking at Arthur's notes) I have no idea what otter trawling is. He mentions it here a couple of times.

Michael: I have heard of it but not sure. Otter trawling, that must have been the middle trawl. Years ago you weren't allowed to catch prawns of a day time. It was the law. They used to have a little trawl about 20 foot long and they had boards on it, just like the big guys have got outside but just little ones. They used to drag them around before the sixties.

We use now what they call a snigger net. Which is like a trawl with no boards. So when you pull it as you are towing it, it comes in and comes in and comes in and slowly closes itself right up and then you go and pick the net up. You are allowed 140 metres. You shoot down in a straight line

and you have a rope on each end and as you pull it, it comes in and anything that is in it goes back into like a little 20 footer, in a little bag. The snigger net is not actually called a trawl but I suppose technically it could be classed as a trawl because you are still dragging it.

Net sizes

Interviewer: It is great how Arthur has documented all the changes in the nets, and the net sizes in here. It is really good.

Michael: They increased the prawn net size to 1¼ inch mesh. But you couldn't catch prawns as he has got here, by pulling the net by hand any more. You used to pull by hand, but most greasyback prawns are too small and they go through it. What they do now is have the net tight so the prawns can't jump straight through it all the time. Now the nets are 30mm which is roughly 1¼ inches, but they have a 4 pound weight on the net which closes the mesh up. So it is probably like say an inch net or a bit over an inch.

Jellyfish

Interviewer: Are there lots of jelly fish around at the moment?

Michael: No there is not.

Interviewer: When did you last see lots of them?

Michael: There was none this year. There is only the odd little red one around at the moment. Not very many at all. It would be two or three year ago. When they opened the lake up, they opened the big channel up that is when it come in. There was two different types, there was the little round monkeys, then there was the saucer fat. They haven't been around for a couple of years.

Interviewer: So in the eighties there are lots of them about?

Michael: No it wasn't until they opened the channel up. Then we got lots. There was lots when we was hauling, so that would have been '93, '94.

Arthur: When we used to get all these big catches of fish and prawns in the 50s, there'd be a ton of blubber some nights, but there has been no stinging blubber since 1972.

Interviewer: So there is not as much blubber about as there used to be?

Michael; There's been no stinging blubber in my time, just one or two heads of it through summer.

Arthur: The other blubber they call it monkey spunk, it is a phosphorus jelly, and sometimes there is a saucer blubber, but the stinging blubber is the one that purifies the water the stinging stuff purifies the water. Every time there's been record catches years ago there was lots of the stinging blubber but now there's none. There used to be thousands of the stinging blubber in the lakes.

Michael: There hasn't really been any blubber in the lake since the power station started.

Interviewer: That is what someone else said too.

Michael: A lot of the fisherman were told (well Jobbo knew people up in the power station and they told him) they said they used to put stuff in the water to kill them.

Interviewer: I heard someone else say that too. They said it was because they were blocking the screens.

Michael: Yeah, it was big trouble. There also hadn't been big channels, much in that time either. They also put stuff in through the pipes, to clean the pipes out, that killed fish every now and then.

Entrance channel and changes to the lake

Michael: I don't know what would be the happy medium, like if you had the big deep channel and you had more tides.

Interviewer: Does it affect the prawning, as you said that dredging the northern channel actually affected your prawning?

Michael: Has it been that we haven't had the rain or we haven't had the algae and why haven't we? When they had problems with the acid sulphate soil, did that kill the algae? It hasn't come back. Come to think of it, it hasn't been around for quite a few years, like the red wool we used to get, there has been a little bit around Tumbi and that. Now we have got little chick weed, a little tiny thing that only grows little leaves on it. Grows on the bottom, that has only been in the last few years. In my early days we never got that. You only ever got ribbon weed and then green slime and your red wool. But now you get that stuff. When we drag our prawn net along the bottom you get all that. Pop used to call it bream weed so they must have got it years ago. Since they have done the channel is the only time I've seen it. In my early days of fishing there was none. But we haven't no red wool or green wool worth talking about at the moment.

Interviewer: Changing the entrance channel, I don't know if we know what is going to happen, I guess that is the thing.

Michael: It could be an experiment. It used to block up years ago.

Interviewer: Is that good or bad?

Michael: I think that was in 1939 it was blocked. Pop can tell you.

Arthur: In the twenties we had 3 large floods, in the thirties we had 1 and that was 1939. In the forties we had 3 large floods. In the fifties we had 4 large floods. In the sixties we had 2, in the seventies we had 2. In the eighties we had no flood at all. So far on the 4th February 1990 we had to the bottom step (of my house) there. So if we don't get a flood in the next 3 years it will be 1 flood for 20 years! The floods keep the Entrance channel open. When you get a break water that might make it different.

Arthur: In 1931 the entrance channel was very wide that was because we had some big floods. That was 1931, and one night we got 85 boxes of prawns. We caught them about 2 miles up the lake. The bigger the channel the more spawn comes in, and you get a lot of prawns. In the fifties we had some good channels and that's when we got all these fish.

Arthur: They say they have increased the channel by 60%, we are looking for about 300%.

End of interview

2. Second Interview

held on 20/5/98 and continued on 21/5/98

Background

Arthur's father was born at Dora Creek and was a fisherman all his life. His grandfather, Bill Clouten was a boat builder. Arthur retired from fishing in 1980 and his grandson, Michael took over. Michael went out with Jobbo (Herb Jobson), who was Arthur's brother in law.

A second entrance to the lakes

Arthur; Wyong Council and their employees, they said there used to be a channel up at middle lake and this employee, in the 1950s he was working for the council and his job, so it wouldn't open up again, his job was to get logs and put them there to stop it happening again.

(Arthur reading his letter to the editor in the Advocate newspaper many years ago;) Recent letters in the Wyong Shire Advocate regarding the second opening of Tuggerah Lakes at Budgewoi, were quite correct. When fishermen came to the lakes last century, names were given to many parts of the lake and the name given to that area was skeleton yard. My own knowledge of the area goes back to 1922, when taking a launch from Tacoma to Reid's Mistake (Lake Macquarie). My grandfather, my uncle (Herb) and myself camped there after catching some fish. Me and Herb took the boat out and caught some mullet while grandpa stopped there to make camp. I camped there many times between 1927 and 1934. My personal opinion is that there was no entrance there for at least three hundred years and it could well be three thousand years.

Interviewer: Why was it called skeleton yard?

Arthur; Because it is a skeleton of what was once a channel.

Interviewer: I am interested in other names used by the fishermen (looking at map)

Arthur; Past Canton Beach down the eastern side is what they call Cedar Wharf (that's where they used to take the cedar across in boats when it was shipped out at Cabbage Tree Harbour). and about 300 yards Past Cedar wharf (towards the entrance) was called "shit-hole". This area had a lot of mud in it. and it went out about 40-50 yards and was about 300-400 yards long.

Arthur; Another place in Wyong Bay was called Camphor Point. It was called this because the smell of the rotten weed. Long before my father came here, fishermen called it camphor point. In olden times when they didn't have vaccinations for flus and colds, and when they heard a flu epidemic was coming they make a bag out of calico and you'd put camphor in the bag and put it on your chest as a remedy and when you went over to camphor point it would smell the same.

Arthur: At Berkeley Vale, near the boatsheds, was Duffy's wharf, but the wharf was actually made of logs placed under the mud in the water. If you didn't use this log 'wharf' you would go a long way down into the mud.

Prawning in Lake Macquarie

Arthur; In 1925, in Lake Macquarie, Herb, grandfather and I would night prawn near Vales Point and around there, and we used to do three drags and by the time we had picked out all the crabs and weed it would be one or two o'clock in the morning and we would then cook them on the shore and we would curl up in the bottom of the boat until sunrise and our first stop would be Careys Bay and then Toronto and we'd fill our baskets up with cooked prawns and sell a quart measure of prawns for a shilling.

Munmorah Power Station

Interviewer: How did Lake Munmorah Power Station affect top and middle lake

Arthur: Where they put the inlet channel, that was one of the best meshing areas for bream. Me and Jobbo (Herb Jobson) would get up to 10 boxes a night. On the other side (at the outlet) there was a good reef and you'd put your net around the reef and do two good hauls, one each side of the reef

Arthur: And the prawns were getting caught on the screens of the inlet channel, I knew it would happen because I'd seen it happen at Vales Point and Wangi Power Stations. I said they should collect the prawns off the screens to raise money for the local hospital but they wouldn't do it, so I went to Fisheries and told them what was happening and they arranged a ballot for the fishermen to see who would get the right to catch the prawns at the inlet and they would put their net across the inlet and catch the mature prawns. But all the small prawns and spawn still passed through and would be destroyed by the heat.

Arthur: There is a report here about the Power Station and the fish. What they don't tell you is that every now and again with the concrete and the green weed that grows on it and they put a chlorine and blue stone mixture or something like that to kill the weed off the concrete, but they don't mention that it also kills a lot of fish and ones that don't die become blind. I remember that happening at Wangi, all the fish at the outlet were blind.

And they don't tell you about all the prawns and fish that die on the screen or are killed as they pass through.

Interviewer: The water comes out warm, is that good for the fish in the lake?

Arthur: No no it brings them across to the outlet in the winter time but what attracts them is not the warm water but all the small fish and small prawns and other life that has been 'cooked' when passing through the power station and makes good food for the fish that hang around the outlet. It is the feed that attracts the fish.

end of interview on 20/5/98 and start of interview on 21/5/98

Red bream catch in late thirties

Arthur: Did the Byles tell you about all the sea fish, snapper, in 1938? Large quantities of snapper in the lake. Snapper is a sea fish and they come into the lake when there is a good entrance, by the millions, about 4-5 inches big, and by Easter they are about 6-7 inches and then they leave again and don't come back. In 1936 they came into the lakes and the entrance was then blocked for a while so they couldn't leave, and at the time Patto and them were catching blackfish in Middle Lake. Anyhow the entrance was blocked and they (snapper) couldn't get out and over near Eeley and Big Flats in Bottom Lake, the Byles found out they were there. There was Charlie Byles and his father and others, they had two hauling crews, and they went on to one dig and the other crew went on to a dig next to them so they could control the whole area where the snapper were. In those times the net was 1500 yards long, but that wasn't long enough to get all the way around the snapper, so what they did was join the nets together so they had 3000 yards of net. They hauled the nets in and near the shore they separated them again. Charlie Byles made enough money in 1938 to pay for his house, it was about 250 pounds he made from that snapper. I don't know how many digs they did but probably 7 or 8 digs, they were getting about 20-30 boxes with every dig. No-one else in the lake got them. And of course when they opened the lake in 1939 to let the floods out, the rest of the snapper left.

Large Snapper in Lake Munmorah

Arthur: The only snapper there in 1964, the only marketable snapper then, when the entrance was blocked, they got one that size (18 inches) in top lake, over 2 kilos, probably close to 3 kilos, only one though. The reason why is, its come in with others and then got left behind in Top Lake.

When you used to go into Top Lake in the old days, you used to take a shovel, and you would dig your way in, because it was so shallow, at times it was dry.

Channel through to Top lake

Interviewer: so when did the channel to Lake Munmorah deep?

Arthur: The Electricity Commission, they altered it. Before that most of the time you had to take a shovel and dig your way through, and the crews would use winches to drag the boats through.

Degradation of lake

Interviewer: This newspaper article (dated May 1998) one of the fishing representatives is saying that the cause of some declines in fish is due to habitat degradation.

Arthur: That's what I've been telling you, all that Wyong Council is doing is destroying the weeds. Now when you do it by the tide (ie open up the channel), you make the habitat a better quality, and you get the extra prawns and everyone would catch prawns.

Interviewer: In the last 30 years there has been a lot of urban development around the lake. has that increased pollution?

Arthur: No no whatever pollution was there before. The smell is here only because they never rake the stuff up.

Algae

Arthur: You know the algae has gone now.

Interviewer: What in the last few years?

Arthur: About 4 year ago.

Interviewer: In this photo which was in the local newspaper, you are holding up a handful of slime covered weed. Is that when the algae was bad?

Arthur: Yes, that was in 1985.

Interviewer: So in the 80s there was quite a lot of algae in the lake?

Arthur: It comes in the winter and is green and then it goes brown, and that's when people see it. But fishermen see it when it is green months before. Anytime now (May) if there is going to be any algae, Michael will come in and tell me that they're getting green stuff now. By September-October people could be complaining about it. But if you deepen the entrance channel that won't occur.

Interviewer: Did you see algae like this in the 1920 and 1930s?

Arthur: No because most of the time we had a big entrance, but when it closed, it would only be for two or three years. It took from 1961 to 1980, it took twenty years for enough settlement of mud to cause algae.

Interviewer: So there used to be less algae but it was because the entrance was more open

Arthur: Yes, you see this is the longest period without floods. In the 1950s when we caught all the fish there were 4 floods, in the 20s three big floods. You see the seasons have changed, there are no big floods any more. Wyong Council doesn't tell the people living around the lake about all the floods. I've got the records.

Interviewer: With the algae, you said that it started growing between 1960 and 1980, because the Entrance wasn't big enough.

Arthur: Yes yes

Interviewer: So there wasn't much algae in the 1920s

Arthur: that's right

Interviewer: And it increased between 1960-80

Arthur: Yes, up till 1994 when the entrance opened up. And then it became less. But that will come back if they don't keep the entrance open. Once they stop dredging it will come back again. But if they got a breakwall they could solve the problem forever.

Weed

Interviewer: I am now going to draw a graph of weed in the lake. In the 1920s there was a lot of weed?

Arthur: Yes

Interviewer: And in the 1940s there wasn't a lot of weed?

Arthur: That's right

Interviewer: And then it increased through to the 1960s

Arthur: No it started in 1953-54 and it reached its peak in 1961 and then after 1964 it decreased and by 1967 there was hardly any and by 1977 there was hardly any. After that there was only a little bit of weed around only 100 yards off the shore. There was a little bit of stack, a little bit more than what's there now.

Entrance closure in late 30s

Interviewer: Now when the entrance was closed, that was in 1938?

Arthur: Yes. It was also closed 1937. It was closed for about 3 years and it was April 1939 when it was opened. According to my brother it was open for a little while in 1936, it must have been in the prawn season because a lot of little crabs came in. (In 1936 Arthur was fishing up the coast)

Arthur: The Entrance could be open and if there were north-easterly winds, two days later it could be blocked. The north-easterlies wash the sand across it.

(Michael arrives)

Algae

Arthur: Michael, how much algae do you see in the lake right now?

Michael: Not alot. There's very little

Interviewer: We were doing a graph of algae and from what Arthur was saying there was not a lot of algae until about 1960 when the algae started increasing.

Michael: Yes there were lots of red wool and green slime when I started, there were also lots of prawns and fish.

Interviewer: Then Arthur said that in 1994 the algae started declining and there hasn't been much since then.

Michael: Yes, there hasn't been any for a few years.

Weed

Interviewer: We also did another graph of how the weed has changed since the 1920s and from what Arthur was saying there was a lot of weed in the 20s and then it declined in the 40s and then it started growing again in about 53-54 and there was a lot of weed in the 60s and then it declined until 1977

Arthur speaking to Michael: How far out was the weed when you and Jobbo started (in 1981)?

Michael: Just around the flats. When I started hauling in April 1981, the weed was mostly around all the flats, all the shallow water. And then in Wyong Bay it was out a fair way, you couldn't haul in there, the only year you have really been able to haul in Wyong Bay was when all that weed died when they started doing all that work around the shores of the lake. Other than that the weed has been much the same except for that 18 month period.

Anthony: So there was a decline in the amount of weed when they did all the dredging around the lake?

Michael: Yes, that was in the early 90s I think.

Arthur: It is now starting to grow a bit more now in the top lake than what there was a couple of years ago.

Weed and fish

Michael: Yes, there's been weed around now for quite a few years now, it is just that the fish haven't come back. Since the weed disappeared and they did that dredging we haven't had any prawns, we haven't had any algae, the bream have gone down, the mullet have gone down, the blackfish have gone down. The only things that went up was sand whiting and blue swimmer crabs, and then also mud crabs this year.

Arthur: 4 years ago, he was getting 12-16 boxes of sand whiting and things like that.

Arthur: That was never done in my time. In the 20s and 30s they got lots of whiting but they were all small. In all my time there was never that quantity of big whiting. *(additional comments from Arthur in December 1998: Until 1952 the legal minimum size for whiting was 9 1/2 inches and large quantities of whiting would sometimes be caught with a net called a 'popper'. In 1952 the minimum size was increased to 11 inches.)*

Michael: They were telling me that they were getting lots of sand whiting in Illawarra Lake then too, so it might have been something else that caused it. We also got a lot of trumpeter whiting then too.

Interviewer: When was this, how many years ago?

Michael; 1993-1994-95, some time around there. That's when we were getting all the blue swimmer crabs too. I'd have to look on the receipts to know exactly when it was. In 1993-94 there was plenty of weed around then, the weed had come back by then, after they dug it all out and dredged around the shore. The weed hasn't really disappeared since then. When we were getting all them fish, I think they were still mucking around up at Canton Beach but the weed had come back on most of the lake. In some ways, the dredging around the shore actually made the weed worse than it was in a lot of places.

Interviewer; So the weed got less in the early 90s and by 93-94 it was recovering?

Michael; Yes it had started to come back, and by about 95-96 it was as thick as ever. It has been as thick as ever for quite a few years now.

Another relative; They were also getting a lot of trumpeter whiting in the 50s. They were getting 100 boxes at that time. (*Additional comment from Arthur in Dec 1998: This was in 1955. Arthur and Jobbo – Herb Jobson – caught 58 boxes on one occasion.*)

Michael; We got a big shot of sand whiting in the 80's too, about 20 boxes of sand whiting on one occasion. But mostly in the 80s you might get a box or a couple of boxes or occasionally you might get 4 or 5 boxes. Nothing like what we were getting for that period around about 1994.

Fish

Interviewer; Can I try very roughly to get some picture of fish quantities over the years?

Michael; You could get all the records from the fish co-op. But until they did all that dredging work, the fish catch would always be going up and down, but basically it was the same, there's always been ups and downs, since I started, but the biggest change in my time was when this dredging was done. And its not recovered yet.

Interviewer; You did say that there was quite alot of small fish in the lake now

Michael; Oh yes there's a lot of small fish, and this year the most blackfish that has been caught since the dredging. And there's alot of small mullet out there now. The bream are probably at their damn worst, ever in history! there is practically none there.

Arthur; When there is lots of weed in the lake the fish are all spread out. And you might get 10 boxes of fish in a night. But as the weed dies the fish all move into the remaining weed. They are more thicker. And in 1977 there was a record catch in a month, 25 tons by the crew of Jobbo and others, 25 tons in the month, an all time record. And the reason why, as the weed dies the fish go back into the remaining weed and the fish are more thicker. So they are all in the one spot and they can catch the lot.

Arthur; When the weed died in the 40s, the weed was only about 30 yards wide near the shore and we got a boatload of fish off it. But when the weed goes further out, you might only get 10 boxes because they are spread out more.

Weed

Interviewer; When the weed died in the late 30s and early 40s did both the ribbon weed and stack weed die?

Arthur; Yes, all weeds died.

Interviewer; Some times you've caught more fish than other times, which were the best years for catching fish, which decades? When was the fish the best?

Arthur; The biggest lot was in the 70s but my best was in 57-58.

Interviewer; So 1957-58 were good years for fish?

Arthur; Yes. Me Jobbo and Bruce, we had 43,000 lb of fish each, so three times that. That was in 57-58.

Interviewer; So you each caught 43,000 lbs and the total for the crew, for one net, was 130,000 lbs?

Arthur; Yes.

Interviewer; When else was the fish good? I think you said the 70s?

Arthur; Oh yes, but I had to knock off using the hauling net with Jobbo and Bruce because the nerves and arthritis in my hand were bad. I had to knock off using hauling nets in 1965-66. They got other blokes to help. And after Bruce died David Newman and then Michael took over.

Interviewer; When were the fish bad, when were there not many fish about?

Arthur; There was not much fish before the co-op started, it started in 1947-48.

Interviewer; So just after the war in 45-46 the fish were bad?

Arthur; Yes, yes, they were so bad in early 47 and in 46 that the fishermen had a meeting, I was up at Forster at the time. They had been catching all these small fish, and some of them were taking truckloads of small fish down to shops in Sydney, at Manly, and the shops at Wynyard Station. So anyhow, I said we have to try and make this legal, and the bream was the main fish what they wanted, and at them times the legal size was 9 inches. But they wanted the legal size to go down to 8 inches so that they could sell the small fish legal. Anyhow I came down the next month, and I said you are ruining the Lake, it has got to be cut out. And I wanted to start a co-op, they had a co-op at Forster. But the fishermen didn't want to. When they had tried to start one here the fishermen wouldn't have anything to do with it. But the only thing in the lake was undersize fish. They said I was trying to starve them all out and I said no, if we start a co-op we'll make money. Anyhow, I explained the idea of a co-op to them

Interviewer; So that was a bad time for fishing, what were the early 30s like, Was it bad then?

Arthur; Oh no. In the winter time it is always bad, June, July and August there never was any fish. From middle of September till the fish leaves, the lakes is good. The fish leave the lake in, the mullet in March-April, and the bream leaves in April-May. And the small ones come up the rivers, but there's never much fish in the lake for those three months in winter.

Interviewer; There was a time when you worked on Wangi Power Station, was that because the fish were bad?

Arthur; No, that was 1952. They rose the sizes up and so we couldn't catch them. This is the problem with the Fisheries department, I'll explain what happened. The fisheries department superintendent was Mr Roughly, he was supposed to be an expert, he said estuaries are fished out.

If you'd looked at the records of Tuggerah lakes in the 20s, there were 10 or 12 hauling crews, and they were getting some days 40 boxes, blackfish especially, and in the thirties there were still 10 or 12 haulers and they were getting them in the summer months, then all of a sudden there is none, you think why is it? He said it was fished out. Harris, the inspector, did everything in his power to stop the fishing. They rose all the sizes up and many of the fishermen left, even the Byles went over to work at Wangi. Others stayed and caught the 12 inch mullet, which they would sell on the

black market, directly to fish shops. I was watching the lake on the weekends and in September 1953 I went up to top lake and I saw that there was fish there. But there were rumours that anyone who knocked off fishing to work at Wangi wouldn't get a licence again. So I saw the Chief Inspector and asked him. He said it wasn't true and he said he'd make sure I got a licence. But Harris wouldn't give me a license so I said I'd bring this to an end so I went up with the boat and in two nights I got 160 pounds worth of fish. The Inspector came around and said I'd never get that money. So I complained but one month later Harris still wouldn't give it to me but eventually the Chief Inspector arranged the licence for me and I got the money back.

Local names

Interviewer; I would like to learn some of the terms for places around the lake; Where is the Eeley?

Arthur; Eeley is along the east side of the lake, down from Cedar Wharf and Shit Hole. Eeley Flat is between Shit Hole and Eeley.

Arthur; Near where the caravan park is at Canton was known years ago as "the rushes". Rushes used to grow out into the lake and they all died in 1938. What we used to do there was on Good Friday, we wouldn't have gone near there for a couple of weeks, and on Good Friday we'd go up and put our net around the outside of the rushes and then go in and set them alight. We'd get two or three boxes of fish out of the rushes. Well all the rushes died when all the weed died. They'll never come back now because Wyong Council has deepened it there now.

Interviewer; What do you call between Eeley and the Entrance?

Arthur; Eeley, then Deep Dig, Big Flat, and then the Sandhills was near the North Entrance. That's because there was a big sandhill there which you could climb up and then roll all the way down. Pat Clifford, he had a lot of land near there. The sandhill has gone now and there is houses there. There is a big shallow flat in the lake near where the sandhill used to be, nearly two coil (*of rope*) wide, nearly 500 yards. Those flats have a hard bottom.

Interviewer; Why was it called Eeley?

Arthur; Its official name is Eel Haul Bay. You always got a lot of eels there.

end of interview

ADDITIONAL NOTES FROM THE INTERVIEWS

South Channel at the Entrance

Arthur mentioned that the south channel at the Entrance was filled, they starting filling it during the Depression with a volunteer crew and it was finished off by Wyong Council, (so that was after 1947) and he also said that in about 1963 the concrete wall was constructed.

Prawn hauling removes the weed

Arthur mentioned that when they used to go prawn hauling, they would haul up on to the beach, and they might do that up to 24 times in one night when the prawns were running. They stopped the hauling technique when the mesh size was increased and they now prawn in deep water, the aim being that they make the net taut and they are also allowed to catch smaller prawns, there is no limit on size now, but there is a limit on mesh size. They prawn in deep water and don't haul any more, they actually run the prawns along the net and then catch them at the end of the net. The fact that they are not hauling any more means that they are not raking up the weed along the shore any more, he said that was a significant reason why there is more weed.

Prawn size limit removed

Arthur said that the legal size of prawns was 3 inches when they were hauling, then it went up to 3 ½ inches and now there is no legal limit on prawn size so that they are now catching prawns only 1 inch big, that is quite common he said.

Large prawn hauls

Arthur recalled that in 1931, he caught 84 boxes of prawns in one night (a box is 60 lbs) and 125 boxes for the whole week. They received £37 for the whole lot, which was £9 and 6 shillings per man. He also mentioned that on 19 Feb 1955 he and Herb Jobson got 38 boxes of prawns (19 boxes each), which sold for prices ranging from 2 shillings 7 pence to 3 shillings 5 pence per lb. Arthur received (after the agent's commission) £142 and 10 shillings for a total of 1060 lbs of prawns. Another good week was 2 Feb 1955, when they received £147 and 12 shillings, with prices ranging from 2 shillings 7 pence to 3 shillings 11 pence. (*Arthur still has all of his receipts for the sale of his fish at the markets.*)

Further notes on the weed

Michael Clouten felt the abundance of weed growth in the lake might have declined in the early 1990s due to the increased amount of freshwater in the lakes over this period, especially during the 1990 flood.

Seasonal growth of weed

Michael mentioned the weed, I think he means the seagrass, would die back every winter and become much smaller in distribution and abundance. Once the water warmed up in spring and summer it would grow very quickly. Even with swans grazing it or whatever it would grow extremely quickly once the water warmed up.

General decline in fish along the whole coast-line

Michael also made the comment it was not just Tuggerah Lakes where fish have declined, they have declined in the Gosford area as well and there is no professional fishing going on there, so how could it possibly be just caused by professional fishing.

Appendices

Appendix 1: Family background

On the 20th Dec 1848 George Clouten and wife Elizabeth left Plymouth England to come to Australia with children Elizabeth-Ann 12 years old and William 10 yrs. They arrived in Sydney on a ship named the 'Toby' on 10/4/1849. George and Elizabeth moved from the Maitland district to Lake Macquarie in 1874. He purchased a section of land right at the Belmont Village and commenced fishing immediately. The Sydney Morning Herald referred to his contribution to the Fishing Industry,

“A new species of industry has been opened up by Mr George Clouten of Lake Macquarie who has initiated a regular fish trade between the lake and Newcastle or Sydney. Fish has become very scarce and Mr Clouten has received orders for as much fish as he can supply either in Newcastle or to be forwarded per vessel 'Kembla' at night to Sydney”.

This included such varieties as mullet, tailor and whiting. Other fishermen joined George Clouten in his business and by 1877 it was reported that about six tons was taken from the lake each month to the Newcastle or Sydney markets.

William Clouten married Naomi Gill on the 16th March 1858. He was 18 years old and she 17yrs. Naomi Gill was born on 12/12/1841 at Camperdown Property near Camden, NSW.

William Clouten and Naomi lived at Sugarloaf and their children were; William John, born 1859 (carpenter and boat builder, and Arthur's grandfather), Miriam Elizabeth, Mercy Anne, Naomi, George, Diana Jane, Edward, Ellen, Grace, Harry, David (vegetable grower & green grocer), Ernest (timber industry) and Hannah.

William John married Jane Cowell, aged 17 years and born 1/8/1866 at Rose Hill in Lancashire, England. She arrived in Sydney with her father as a 12 year old on or about 1878. The date she married William was 14/3/1883. Their children included; George William Clouten, born 9/7/1884 (Arthur's father), Margaret, Alfred, Edith, Abraham, Leslie, Nathaniel, Mabel, Ethel, Frances and Herbert (born 10/2/1911).

George William Clouten (Arthur's father) married Carmen Jane Branson in 1908 and they had 11 children, Vera, Arthur George, Harold John, Walter Leslie, Norman Edward, Allan Roy (died as an infant), Paul Thomas (died as an infant), Bruce Stanley, Lorna Joan, Phylliss Joyce, and Ivy May. Lorna married Herb Jobson (Jobbo) who was Arthur's fishing partner for much of his career.

Arthur married Dulcy Hardy in 1937 and they had 4 children, Ronald Stanton (born in 1938, died 1940), Elwyn Owen (born 1940), Noeline Joy (born 1944) and Neville Goerge (born 1949, drowned 1956). Arthur has 6 grandchildren, including Michael, who was born in 1964 and took over the fishing business in 1981.

(information supplied by Arthur Clouten and Lorna Jobson in December 1998)

Appendix 2: Campaigning against fishing regulations; 1960s

In 1961 I wrote many letters in an endeavour to have the mesh of prawning nets reduced to the former $1\frac{1}{8}$ inch size, however I couldn't achieve the desired result. I also got my solicitor to write to the authorities regarding the matter, and the following is a reply I received;

Chief Secretary Dept.,
121 Macquarie Street,
SYDNEY
10th August 1961,

Messrs. J.A. Meagher & De Coek,
Solicitors,
Liverpool House,
255/7 Castlereagh St.,
SYDNEY.

Dear Sirs,

I refer to your letter of 6th July, 1961 (D/7512), concerning netting trials conducted in Tuggerah Lakes some little while ago to test the efficiency of prawn nets in use in that water. These trials were conducted in the presence of the Superintendent of Fisheries and other senior fishery officers to demonstrate whether nets consisting of the prescribed mesh of $1\frac{1}{4}$ " , which are required to be used in all estuarine waters throughout the State, were capable of catching reasonable quantities of prawns in Tuggerah Lakes the same as they do in other similar coastal lagoons.

The experiment proved this to be so and that only a very few prawns escaped, and were captured in the following net, which consisted of a mesh of $1\frac{1}{8}$ ". Actually the net of $1\frac{1}{8}$ " mesh only landed about 15 prawns, the majority of which were only $2\frac{1}{2}$ " and less in length, which clearly demonstrated the efficiency of the $1\frac{1}{4}$ " net to retain the majority of the prawns in the particular area where the test was carried out.

Yours Faithfully,
Under Secretary.

The next letter sent by my Solicitor was on 28.8.61;

28th August, 1961

The Under Secretary
Chief Secretary's Department
GPO Box 30,
Sydney

Dear Sir,

We thank you for your letter of the 10th instant.

We understand from our clients that the demonstration was carried out at a place known as Cedar Wharf Corner where there is a depth of water amounting to only a few inches. It seems that this depth of water would render insignificant the size of the mesh as the net would not be able to open properly.

We feel sure that the Department would see to it that any test was fair not only to the Department but to the fishermen themselves.

We shall be glad to have your comments and your assurance, if necessary, that a further test will be taken under conditions which will settle the matter of the size of the mesh.

Yours Faithfully
J. A Meagher & De Coek

Towards the end of 1961 the following letter was received;

Chief Secretary's Department
121 Macquarie St, Sydney.
27th November 1961
Quote No. 60/2866
G.P.O. Box 30, SYDNEY.

Messrs J.A Meagher & De Coek
Solicitors,
255-57 Castlereagh Street
Sydney, NSW

Dear Sirs,

I refer to your letter of the 28th August 1961, your reference D/7512, in the matter of the tests conducted some little time ago in the waters of Tuggerah Lakes on the relative merits of prawn hauling nets.

The area in which the tests were carried out was selected by local fishermen themselves, and is a recognised area in which prawn fishermen operate. A report by an officer of this Department, who attended the tests, indicated that sufficient water was available to enable the nets to be used in the correct manner. No suggestion was made at the time that there was insufficient depth of water and in fact the depth varies little from that in another position where an earlier tests were carried out. All present at such earlier tests readily agreed that there was, even at that time, no justification for a continuance of the concession under which nets with mesh dimension down to 1.125" was permitted.

The Department is satisfied that the experiments were conducted in the fairest manner and the results were a proper indication of the capability of the regulation prawn hauling net to capture reasonable quantities of prawns. In the circumstances there would be no purpose served in conducting any further tests.

Yours Faithfully
A. G. Kingsmills
Under Secretary

As regards the first prawn test carried out by the Department in November 1959, very few prawns were caught in the 1¼ inch mesh net and 1 case of approximately 60 lbs was caught in the following 1⅛ inch net. The second test was done on the night of 14th November 1960 in much shallower depths and only a few prawns of a larger than usual size were caught. These tests were not needed to prove the prawn net sizes in Tuggerah, because from approximately 1883, 1 inch mesh had been used to catch legal length prawns of 3 inches and no grading was necessary. This size mesh existed until 1952 then increased to 1¼ inch for a short period before a concession was made back to 1⅛ inch mesh till 1960.

I would now like to refer back to the letter from the Under Secretary who described the prawn test of 1959. It was stated in his letter that all who'd attended the test agreed 1⅛ inch mesh was not necessary. When I asked those fishermen who were present I found a different story and in fact most of them flatly deny they gave their agreement. Those in attendance said they disagreed with the demonstration's conclusions but weren't prepared to take the matter up with the Fisheries Department. Some of these fishermen were the main illegal trawlers. During the day, trawling was occurring, whether legal or not. Very few catches were made by night prawners as schools of prawns were kept scattered by day, but when left alone they would resume travelling at night.

Another letter was received from the Chief Secretary's Department which was written on 29th November 1961;

Chief Secretary Dept.,
121 Macquarie Street,
SYDNEY.
Quote 61/581
29th November, 1961.

Mr. A.G. Clouten,
Tacoma,
via WYONG..

Dear Sir,

I refer to your letters of the 9th and 10th November, 1961 addressed to the Chief Secretary Mr. C.A. Kelly M.L.A. in which you referred to a number of matters relating to prawn fishing in Tuggerah Lakes.

Your request that the capture of prawns be permitted by the use of traps has been referred to the District Inspector for his investigation, and perhaps you might be good enough to contact the Inspector and explain precisely the method of fishing you have proposed so that the matter may be fully examined.

Your request that consideration be given to the use of otter trawl nets for the capture of prawns in Tuggerah Lakes from December to April, has been examined but it is advised that this method of fishing cannot be permitted. Several years ago an extensive investigation into the estuarine prawn fishery was conducted by a Marine Biologist of the Department, and this officer's recommendation for the proper management of the prawn fisheries provided that on no account should otter trawling be permitted in lakes or estuaries, such as Tuggerah Lakes. The Biologist's reasons for this recommendation were that irreparable damage would be done to the bed of any lakes on which trawling was permitted, and this, in turn, would have detrimental effects on the resident stocks of greasyback prawns usually found in such waters. The fact that the weed growth in Tuggerah Lakes has restricted the capture of school prawns, by the use of hauling nets, cannot be considered to be a strong enough reason why otter trawl nets should be permitted in the lake.

Tests conducted by fishery officers, some little time ago, in the waters of Tuggerah Lakes, proved conclusively that payable quantities of good sized prawns could be taken with the use of a hauling net having a mesh size of $1\frac{1}{4}$ inches. It is not proposed to give further consideration to the question of the reintroduction of the prawn net having a size of $1\frac{1}{8}$ inches as the Department considers that fishermen are not adversely affected by being required to use this standard size hauling net.

Another letter, dated 15th December 1961 was also received, in response to letters I sent to the Premier, Mr Heffron;

Dear Mr Clouten,

..... your letters of 5th November and ***.December..... and to inform you that he sought the advice of his colleague, the Chief Secretary, in regard to the matters you have raised.

The Chief Secretary has now indicated that the condition of Tuggerah Lakes has resulted from weather conditions which have prevailed generally over the past few years, the lack of movement in the waters of the lake having allowed a build up of the weed growth. Naturally, this growth has impeded the activities of both professional and amateur fishermen, but the Minister pointed out that the condition of the lake is a matter which his Department is unable to correct. Whilst it may be some time before the main part of the lake becomes suitable for prawn hauling, it is understood that excellent catches of prawns have been made at the entrance of the lake in recent weeks.

With regard to your proposal that local fishermen be permitted to use traps for the capture of prawns, the Chief Secretary stated that this matter is receiving consideration and that you will be advised of the decision reached in due course.

As to the question of permitting the use of prawn hauling nets with a mesh of 1 $\frac{1}{8}$ " the Minister advised that the decision to withdraw the concession allowing the use of these nets was made only after properly conducted tests in Tuggerah Lakes. These tests proved conclusively that payable quantities of good sized prawns could be obtained in the lake by the use of the standard 1 $\frac{1}{4}$ " mesh prawn net and there was, therefore, no reason why the concession, allowing the undersize net, should be continued. The purpose of requiring the use of the standard net is to ensure that immature prawns are allowed to escape to restock the estuary. It is the Department's opinion that further tests, on the relative catching capabilities of the 1 $\frac{1}{8}$ " and 1 $\frac{1}{4}$ " prawn nets in Tuggerah Lakes, would serve no useful purpose.

The Chief Secretary has indicated that your assertion that many hundreds of prawn fishermen are using scoop nets containing undersize mesh has been referred for a report from the District Inspector.

Unable to make a living, many prawn fishermen resorted to prawn trapping and illegal otter trawling. I asked that trapping be allowed whilst there was a large amount of weed and the increased prawn net size prevented catches by hauling.

On the 2nd February 1962 I was told prawn trapping had been investigated and could not be allowed

Chief Secretary's Department
121 Macquarie St
Sydney
Quote No. 61/581
2nd Feb 1962

Mr AG Clouten
Tacoma via Wyong, NSW

Dear Sir,

I refer again to my letter of 29th November, 1961, in which I mentioned that your request that the use of traps be permitted in Tuggerah Lakes, for the capture of prawns, was being investigated and that I would again contact you when investigations had been completed in this matter.

I now wish to advise that after studying the details of the prawn trap referred to, it is quite apparent that the trap is illegal and, therefore, its use in Tuggerah Lakes, or in any other water, could not be permitted by the Department.

Yours faithfully,
A Kingsmills
Under Secretary

A further letter was received from the Under Secretary in February 1962 which stated that the tests held at Tuggerah Lakes had shown that good quantities of prawns could be caught with 1¼ inch mesh, and also stating that both otter trawling and the use of traps was illegal.

Premier's Department
Box 13, GPO
Sydney
23 Feb 1962

Dear Mr Clouten,

I have been requested by the Premier to write again in reference to your recent letters concerning prawning in Tuggerah Lakes.

The Premier has now been advised by his colleague, the Chief Secretary, that the mesh size of nets, and the manner in which the nets may be used by both professional and amateur fishermen, are prescribed in the Fisheries Regulations and, as has been explained previously, have been so prescribed to ensure that whilst sufficient prawns are made available to the general public for consumption, the stocks are not reduced to an extent which would endanger the prawn fishery. Until quite recently, fishermen operating in Tuggerah Lakes were permitted to use a prawn net having a mesh size of 1¹/₈ inch, which was less than the size prescribed for all other waters. However, tests conducted by officers of the Chief Secretary's Department, at which local fishermen attended, indicated conclusively that good quantities of marketable prawns could be obtained using the regular size net and, accordingly, the concession to the Tuggerah Lakes fishermen was withdrawn. The Premier is informed that there is no evidence to indicate that a smaller mesh is required in prawn nets used in Tuggerah Lakes.

With regard to your contention that the fairest way for all professional fishermen to share in the prawn catch in Tuggerah Lakes is to pool the total catch and share the proceeds, the Minister indicated that the Fisheries and Oyster Farms Act does not make any provision for the determination of the manner in which fishermen shall arrange for the best financial return for their efforts. Should the fishermen of Tuggerah Lakes desire to pool their catches, such an arrangement would be purely for their own determination.

As to your enquiry whether otter trawling for prawns is permitted in Tuggerah Lakes, the Chief Secretary advised that, in view of the damage which this method of fishing would cause to the Lakes' fisheries, under no circumstances will it be permitted in Tuggerah Lakes, or in any similar water. Otter trawling is illegal and any persons apprehended will be prosecuted by the Department. It is stated also that inquiries reveal that the prawn traps to which you have referred would be illegal and accordingly their use will not be allowed.

The Minister added that your concern for the welfare of the fishermen operating in Tuggerah Lakes is appreciated but that it must be kept in mind that his Department is responsible for the administration of the fishing laws and the determination of the methods of fishing and types and sizes of gear which may be used in this water. In determining these matters, the Department is required to consider not only the professional fishermen's point of view, but all those aspects which in any way affect the fisheries in Tuggerah Lakes. You may be assured that any restrictions or measures imposed on professional or amateur fishing in these waters have been determined only after careful investigation and consideration of all aspects concerned.

Yours faithfully
Under Secretary

I had pointed out in my letters that Tuggerah Lakes were quite different to most other estuaries along the coast except for Lake Illawarra, and they had the use of a running net. A short time later the local Inspector came by and told us we could use a running net with a 1¼ inch mesh, and the following letter was received from the Chief Secretary (in early 1962):

(this is the 2nd page of the letter only, the first page is missing)

Page 2: At the present time, apparently due to climatic conditions, the growth of weed around the shallow foreshores of Tuggerah Lakes has restricted to some extent the activities of commercial prawn fishermen, who at this time of the year would normally make good hauls with the use of the prescribed hauling net from the foreshores of the Lakes. However to assist these fishermen the Minister recently agreed, as a concession only, whilst the difficult conditions persisted, to fishermen using their prawn hauling nets as “running nets” a method which would enable them to operate with a reasonable degree of success even under the present conditions. Apart from this type of fishing, local fishermen are at present making good catches of prawns in the entrance waters of Tuggerah Lakes with the use of set pocket nets; the present conditions of the Lakes do not exclude the use of meshing nets for the capture of fish, and taken all around, there is no question of hardship being encountered by local fishermen because of the present situation.

Over the past few months the district Inspector of Fisheries at Tuggerah Lakes, with the assistance of other officers, has been kept extremely busy in preventing irresponsible fishermen trawling in Tuggerah Lakes and his efforts have met with reasonable success considering the difficulties under which he is required to operate, and the area of water where illegal trawling could be carried out. Whilst the permitting of the use of prawn trawls in Tuggerah Lakes would be a simple remedy to overcome the Inspector's difficulty, the end results of such an action could only be quite disastrous to the fisheries in these waters. Apart from the fisheries aspect, it must be remembered that Tuggerah Lakes is, perhaps, one of the most popular fishing resorts on the New South Wales Coast, and there is little question that allowing prawn trawl nets to operate in these waters would meet with very strong opposition from residents, business people and visitors to the locality.

In the circumstances, therefore, it is regretted that it is not possible to accede to Mr. Clouten's request that prawn trawling be permitted in the waters of Tuggerah Lakes.

Yours Faithfully,
C.A. Kelly,

Chief Secretary and
Minister for Tourist Activities.

So H Jobson and myself rigged one and were able to get good catches of prawns by running them instead of hauling them. A running net is used from a boat in deeper water and is more effective at catching prawns than a hauling net of similar mesh size.

I continued however, to campaign for the mesh size to be reduced back to 1¹/₈ inch and wrote numerous letters to Government officials and politicians.

Chief Secretary and Minister for Tourist Activities
121 Macquarie St
Sydney
3 Jul. 1962

Mr A G Clouten
Tacoma via Wyong

Dear Sir,

I desire to refer to your letters of 24th May and 1st June, 1962 to the Hon. N.J. Mannix, MLA, Minister of Justice, concerning the control of fishing in Tuggerah Lakes and the operations of commercial fishermen. Your letters have been referred to me by Mr Mannix, for consideration and reply direct to you.

It is assumed that you refer to a meeting convened by the Wyong Shire Industrial Promotion Advisory Committee, for the purpose of discussing a number of matters concerning commercial fishing in Tuggerah Lakes, which was attended by the Superintendent of Fisheries, on 7th March, 1955.

It is noted that you attribute any fall in the annual catch of fish referred to at the meeting to several reasons, including the banning of the use of hauling nets in two of the lakes and the reduction in the length of such nets. It is considered by the Fishery Authorities that the fact that lagoons like Tuggerah Lakes have not got a permanent entrance is perhaps the main cause of any fall in fish stocks; floods and droughts also cause a decline in catch. Closer settlement, industrial and domestic pollution, silt, reclamations, etc are other factors affecting the productivity of such waters. It is interesting to note that since the laws referred to by you came into force and the elimination of part time operators, the regular fishermen are catching much more fish per crew when conditions are favourable than they were previously.

The Department has written to you on a number of occasions, concerning various matters raised by you from time to time, principally dealing with the Tuggerah Lakes fishery. On 27th April 1962, I informed you that it was hoped to press on with the study of the marine fisheries now that the Scientific Staff of the Fisheries Branch has been strengthened by the appointment of additional Biologists. One of these officers, Dr D D Francois, who has taken over the position of senior biologist, only recently came from America to take up this position. He is very well qualified in each branch of fisheries science and will be responsible for the direction of the various research programmes. As essential scientific facts become available concerning the fisheries, it is proposed to regulate and control fishing operations accordingly, with a view to obtaining the maximum production annually both by commercial and amateur fishermen.

It is noted that you have also referred to fishermen in Tuggerah Lakes no longer being permitted to use prawn nets consisting of 1¹/₈ inch mesh. For a number of years such fishermen were permitted to use nets of this mesh as a concession, although the mesh required to be used in all estuarine waters throughout New South Wales, was prescribed as 1¹/₄ inch mesh. The concession was originally granted because fishermen claimed that they could not make reasonable catches of prawns because of the small run in Tuggerah Lakes. At that time, a minimum legal length of 3¹/₂ inches for prawns was in force. Following the research work carried out over a number of years by Dr A A Racek, the former marine Biologist of the Department, the minimum legal length for prawns was abolished in May 1959, as this Officer found that it was serving no conservational purpose. Dr Racek however, strongly recommended that fishermen should be required to use 1¹/₄ inch mesh netting to prevent the wholesale killing of very small or 'rubbish' type of prawns, as such operations could endanger the stock. Following tests of nets carried out in Tuggerah Lakes by senior Fisheries Officers, it was found that it was possible for fishermen to make reasonable catches in that lake with 1¹/₄ inch mesh. Consequently the concession was withdrawn as from 31st May 1961.

Your remarks regarding amateurs using dip or scoop nets of illegal mesh, have been noted. The Superintendent of Fisheries is calling for a report from the District Inspector in charge of the Tuggerah Lakes area regarding this matter.

You may be assured that the Fisheries Authorities of my Department are fully seized with the importance of the commercial fishing industry and the desirability of commercial fishermen being permitted to use lawful nets in waters where such operations are not causing any damage to the fish stocks or seriously interfering with the activities of anglers. As already mentioned the controls on fishing operations will be varied wherever necessary in accordance with scientific facts as such information becomes available.

Your faithfully
Hawkins, for Chief Secretary and Minister for Tourist Activities

The illegal trawling for prawns continued however, and in early September 1962 I wrote to the Chief Secretary Mr Kelly asking for prawn trawling to be made legal;

Dear Sir,

I request that consideration be given for night and day trawling on the Eastern side of the lake for a distance from the sandhills to within half a mile of Canton Beach and 400 yds over the step. This is a necessity on account of weed growth preventing the use of hauling net of 1¼ inch mesh. Whether legal or not some fishermen will trawl illegally and it is usually the ones forced to it that get caught not the ring leader.

Rumours were spreading about the lake that I was reporting fishermen who trawled illegally. My launch had a piece of plank knocked out and sank. After getting no satisfaction from the Local Inspector and unable to get R Maher (M.L.A. for Wyong) to take the matter up nor Mr Heffron, I wrote to R Askin leader of the Opposition. Although I got a response, the issue was not resolved.

Chief Secretary and Minister for Tourist Activities
121 Macquarie St
Sydney
1 Feb 1963

R W Askin Esq, MLA
Leader of the Opposition
Parliament House
Sydney

Dear Mr Askin,

I refer again to your personal representations on behalf of Mr A G Clouten of Tacoma, relative to his request that a small portion along the eastern side of Tuggerah Lakes be made legal for night trawling.

The question of permitting trawling for prawns in Tuggerah Lakes has been raised by Mr Clouten with this Department on a number of occasions in the past, the latest occasion being in September 1962.

Several years ago an extensive investigation into the eastern Australian prawn fishery was carried out by a Marine Biologist then attached to this Department. In his report on his investigations this expert quite definitely stated that under no circumstances should prawn trawling be permitted in coastal lagoons and lakes with, more or less, regularly landlocked narrow entrances, such as Tuggerah Lakes, as concern was expressed that the greasyback prawn, which lives out its entire life in coastal lakes, should be given as much protection as possible, for it to become rehabilitated. Apart from this reason, he indicated that prawn trawling, more than any other method of fishing, destroys aquatic vegetation which is vital to the fisheries generally in waters such as those mentioned.

Even before the advice was made available by this Biologist, the Department had adopted a policy of prohibiting the use of prawn trawls in waters such as Tuggerah Lakes, Lake Macquarie, and Lake Illawarra, because of its general destructiveness of the vegetation on which not only the prawn fisheries, but other important commercial and sport fisheries depend.....

(second page of letter missing)

Eventually, after a lot more campaigning, on the 21st December 1966 the Fisheries Department permitted the use of one launch to pull the prawn net of 1¼ inch mesh. It is now called a 'snigger net', but is actually a trawl. This stopped the illegal otter trawling, everyone using snigger trawl instead.