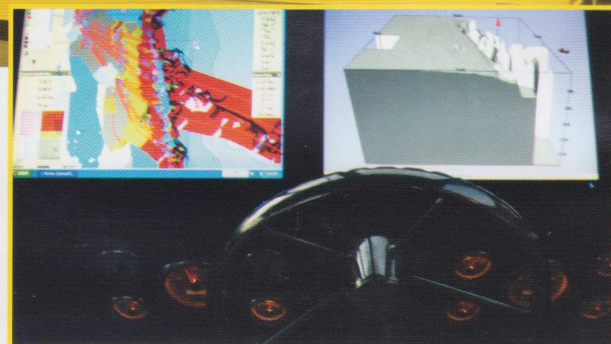


# Technological breakthrough opens up a new fishery for the Rowley Family

By DICK LEE



The Rowley family were pioneers of the East Coast Tuna and Billfish Fishery. They were in at the beginning and fished through the 70s and 80s building up to a fleet of ten long liners, two processing factories and a successful export trade to Japan.

Licensing issues and the increasing demands of the management authority prompted a move to southeast Queensland and the establishment of the broadbill swordfish fishery.

In early 2002, Mike Rowley suffered a heart attack, and operations were wound down. The last long liner was sold in 2006 along with the processing plants and other infrastructure. Mike's son Jo Rowley bought a 12-metre Tasmanian-built boat for something to do in retirement.

Predictably, the 'Nelson Bay' soon drew Jo back into full time fishing and the family's deepwater experience and knowledge was re-activated for a new fishery in the deep water off Mooloolaba, southern Queensland.

Initial explorations on the seamounts and shelf located large quantities of fish but the fishing gear available was inadequate. Electric winches and imported jigging machines were unable to cope with the workload. An extensive search and numerous trials developed a combination of gear that filled the bill.

Jo Rowley collaborated with the French company VirHydro to design a new hydraulic reel to suit local Australian conditions. Dyeema braids were tested and proved to be extremely strong with fine diameters that retained sensitivity even at depth.

The real advance that turned the fishery into reality was the computer and electronic technology adapted to the situation. The 'Nelson Bay' was fitted with RoxAnn, a hydro-acoustic sensor using a patented technique to extract data on bottom roughness and hardness. Interfaced with a GPS and an onboard computer and Maxsea3D plotting program, Jo was able to plot real-time bottom classification and mapping to produce accurate seabed charts. Using his own 3D bathymetric charts, he was able to locate, identify and record aggregations of several species.

With his new onboard chart portfolio Jo is able to target specific fish at known depths and locations on uncharted grounds and seamounts just over the continental shelf 40 to 100 nautical miles off the coast.

Bass grouper and blue eye trevalla dominate the catches on the seamounts at depths anywhere between 150 and 400 fathoms while flame snapper and bar cod are taken on the upper slopes at similar depths. Ruby snapper are also taken. They are exported to

Hawaii and other US destinations as well as supplied to the growing domestic market.

These high-value, line-caught fish are taken from very cold water, quickly brought to the surface, brain spiked, gilled, gutted and placed in an ice brine mixture. In prime condition these fish have long shelf life and are sought by high-end restaurants.

Strong currents and varying depths presented real problems and Jo modified his techniques to cope with the conditions. He developed a method known as Deep Drop Target Fishing in which a set of up to 20 squid-baited circle hooks are set on an aggregation of the target species. At such a depth this requires a fair bit of skill, experience and planning. He recognised that the target fish followed the sonic scattering layer (SSL) and by synchronising time, depth and location with the predicted current, he steams some distance from the target, drops the hooks and follows them in a sort of glide path to the end point. Up to three reels are used in each operation and time on the bottom is rarely above ten minutes.

The typical crew on the 'Nelson Bay' is Jo and two deckies and the time to target from home port can range from four to ten hours. A fishing trip is normally of three days duration.

Jo has both Queensland and Commonwealth entitlements on the vessel.

Jo Rowley's retirement plans have gone out the window. He has ordered a new 15-metre boat, custom-built for this fishery, developed a website, and commenced a consulting service. Through the Forum Fisheries Agency, the island nation of Tonga has started fishing their deep water and Jo is supplying both equipment and advice. Other Pacific Island countries are showing interest.

Locally, interest in the fishery is growing as well. A whole new frontier has been opened and the previously overlooked deep waters are being explored. Smaller boats can be used and this means lower operating and fuel costs and conservation concerns are minimised with the use of a limited number of all steel hooks, minimal bycatch which has a high chance of survival, and minimal interference such as gear loss and ghost fishing.

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