Lord Howe Island Marine Park News

Signing up in the Lord Howe Island Marine Park

Two new signs have been installed to provide visitors and residents with information about the Lord Howe Island Marine Park (LHIMP).

One is located on the Transit Hill viewing platform. It highlights natural features of the marine environments which can be seen from this vantage point. These range from shallow waters of the lagoon to offshore seamounts in deeper waters of the surrounding Commonwealth Lord Howe Marine Park.

The other sign is located at the North Bay amenities shed. It highlights the environmental and cultural values of the North Bay Sanctuary Zone and adjacent Permanent Park Preserve. These both replace previous signs and include updated maps with high resolution aerial imagery.

Funding for the signs was provided by Parks Australia (Commonwealth Government) and they were designed in collaboration with the Lord Howe Island Board and UNESCO World Heritage.

Updated LHIMP signs on Transit Hill (top) and North Bay (bottom). Photo credit DPI

Project Kingfish

Thanks to the combined efforts of visiting researchers, local anglers and a resident beachcomber we now know more than ever about the movements of Yellowtail Kingfish (*Seriola lalandi*). Loved for their great taste and awesome sport fishing, this species is one of Australia's most economically important fish. Despite this, little has previously been known about the regional movements, population structure or habitat use of the East Australian stock.

Project Kingfish is a research program funded by the NSW Recreational Fishing Trust, aiming to address these knowledge gaps by bring together scientists and expert anglers. The LHIMP population is key to the project given the abundance of large Kingfish in these waters, suggesting it is an important location for the East Australian stock. It has previously been unclear whether these Kingfish are year-round residents or transit through different regions.

Over the past two years Project Kingfish has successfully deployed streamer tags, acoustic tags, and satellite tags on Kingfish in the LHIMP with assistance of expert anglers Grant Devine, Scott Wilson, Jack Shick and the Lord Howe Island Game Fishing Club.

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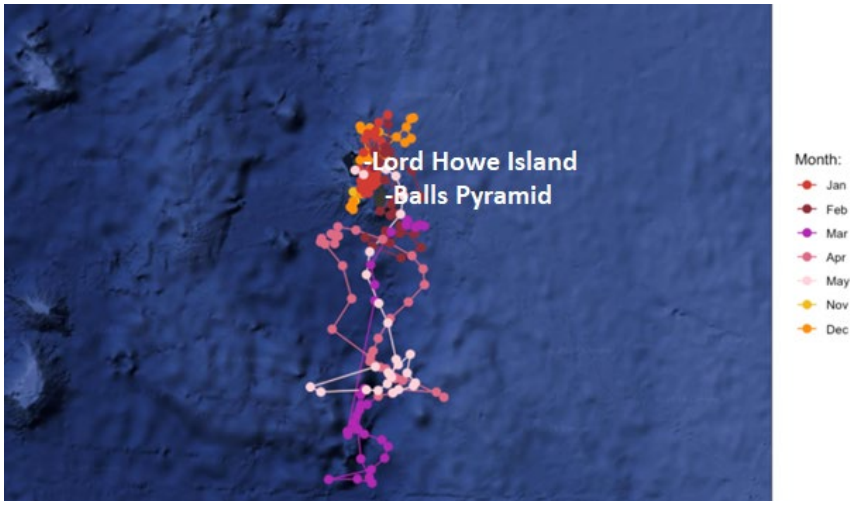
'Streamer' tags contribute to the NSW Game Fish Tagging Program which helps document movements of Kingfish in the waters of Lord Howe Island, mainland Australia, and even New Zealand.



Reconstructed track of the 180-day movement of a satellite tagged Kingfish.

Acoustic tags emit unique signals which are picked up on an array of receivers deployed in the state and Commonwealth marine parks surrounding Lord Howe Island and Balls Pyramid, providing insight into the fish's residency and habitat use.

Satellite tags collect continuous data on a fish's location, depth and surrounding water temperature. They are programmed to remain attached to the fish for up to 12 months, then be released on a fixed date so they can float to the surface to transmit data and be recovered. This data can decipher trends and seasonality in fish movements, to help understand whether they are linked to behaviours like spawning or feeding.

The Project Kingfish research team wishes to thank the Lord Howe Island community for their support of this research and looks forward to sharing more results in the coming months. For further information they can be contacted via email at Project.Kingfish@sims.org.au.

Tagging along for a walk

One tag was deployed off Lord Howe Island on a metre-long sexually mature Kingfish on 28 November 2023 and released to the surface 180 days later. By tracking the transmissions, the research team were able to notify LHIMP staff when the tag washed ashore in the southern lagoon. LHIMP staff contacted a local resident who regularly walks these beaches and learned they had picked it up on their walk that very morning! The recovered tag has now been downloaded, with depth and temperature data recorded every 6 seconds during its deployment.

This data offers incredible insights into the fish's movements, including that it travelled a total distance of 2399 km, moving an average of 13 km each day. This fish had similar movements to the other satellite tagged Kingfish for the first few of months, being highly localised around Lord Howe Island and Ball's Pyramid. It then swam further offshore over the next four months, moving more than 300 km south of Lord Howe Island. This fish dove to an incredible maximum depth of 464 m (one of deepest recorded dives of satellite tagged Kingfish) and inhabited waters between 12.6 – 27°C. Data showing frequent deep dives highlight the ability of this species to adapt to variable depths and pressures quickly. Using this information the Project Kingfish team can investigate the patterns and reasons for these vertical movements.