

## Yellowtail Kingfish Monitoring Report 2016

### Large scale monitoring project

Last year selected recreational charter and private fishers around the upper North Island measured all the kingfish they caught, and collected heads from most kept fish. This was part of a Ministry for Primary Industries funded project to estimate the age distribution of yellowtail kingfish from East Cape to the Three Kings. The recreational target fishery catches a more representative sample of the population than commercial fishing methods.

2,833 kingfish were measured (Figure 1) and otoliths (balance or ear bones) were removed from 484 heads and used to determine age. Northland and Bay of Plenty were analysed separately and ages were assigned to all lengths.

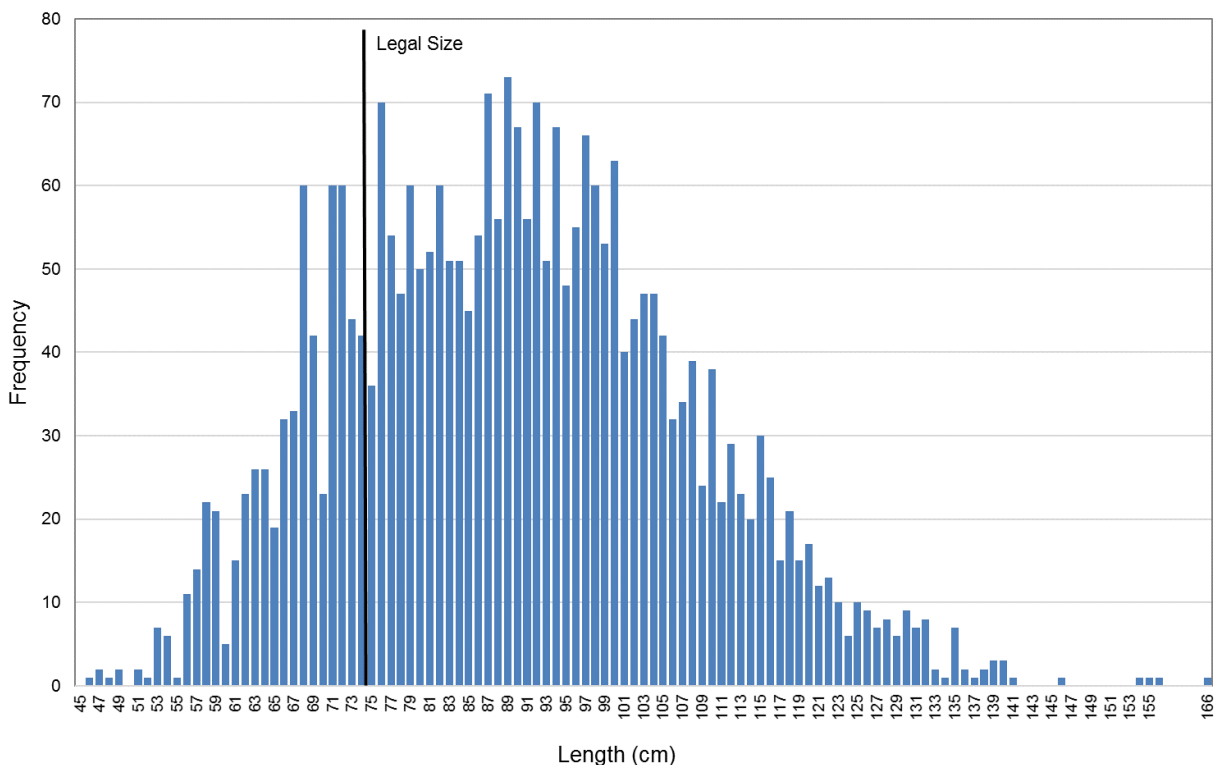
Growth rates varied quite a lot between individual fish within each area. A couple of extreme examples were a 91 cm fish caught at Rocky Point, Bay of Islands, aged 10 years old, while a 122 cm fish from the Hen and Chicks was just 7 years old.

In Northland many 4 year olds were over 75 cm, and all 6 year olds were over the legal size. On average, females were slightly larger than males of the same age.

The age data was used to estimate fishing mortality rates in each area. In offshore areas, where large fish are available year round, the exploitation rate was low. The mortality estimate for inshore Northland area was relatively high, this may be due to the seasonal movement of larger fish which aren't available all year.

### Please measure your released fish

We would like you to accurately **measure the nose to tail fork length of ALL of the kingfish that you release**, rounding down to the nearest cm. We would prefer these fish to be tagged if they exceed 75cm in length. Enter this length onto your tag card for us to collect when your tag cards are submitted. We will be measuring landed fish again this year at the weigh station.



**Figure 1: The number of kingfish measured by centimetre from Northland and Bay of Plenty in 2014–15 in the kingfish monitoring project for the Ministry for Primary Industries.**

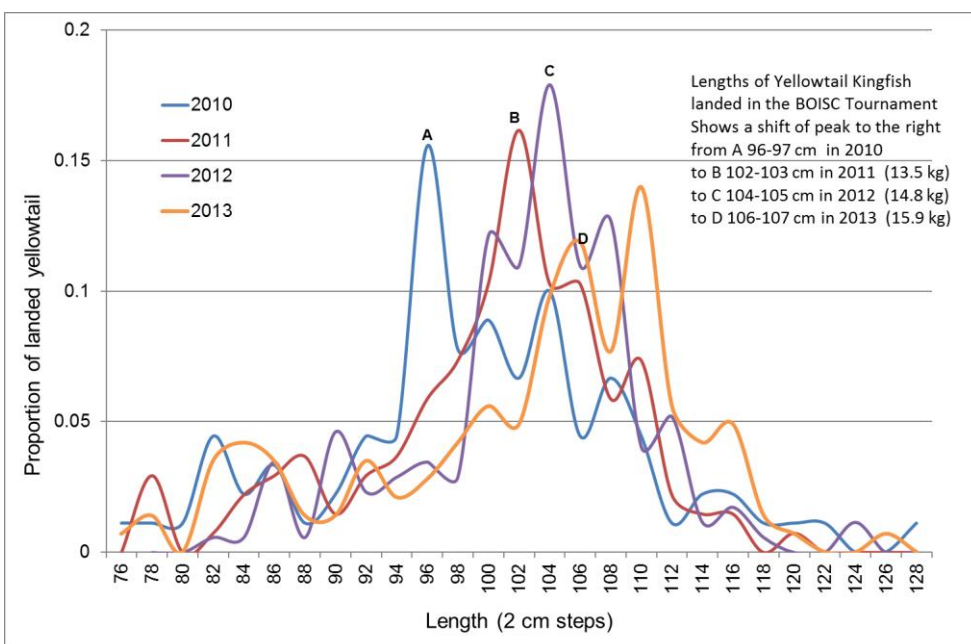
## Results from Bay of Islands Yellowtail Tournament 2010 to 2015

The BOI International Yellowtail Tournament has provided a valuable opportunity to measure a large number of fish at the same time every year. This helps monitor what is happening with the population in the years between the five yearly ageing projects. This work is funded by fishers, not the government, through the support of the Bay of Islands Swordfish Club, New Zealand Sport Fishing Council and LegaSea.

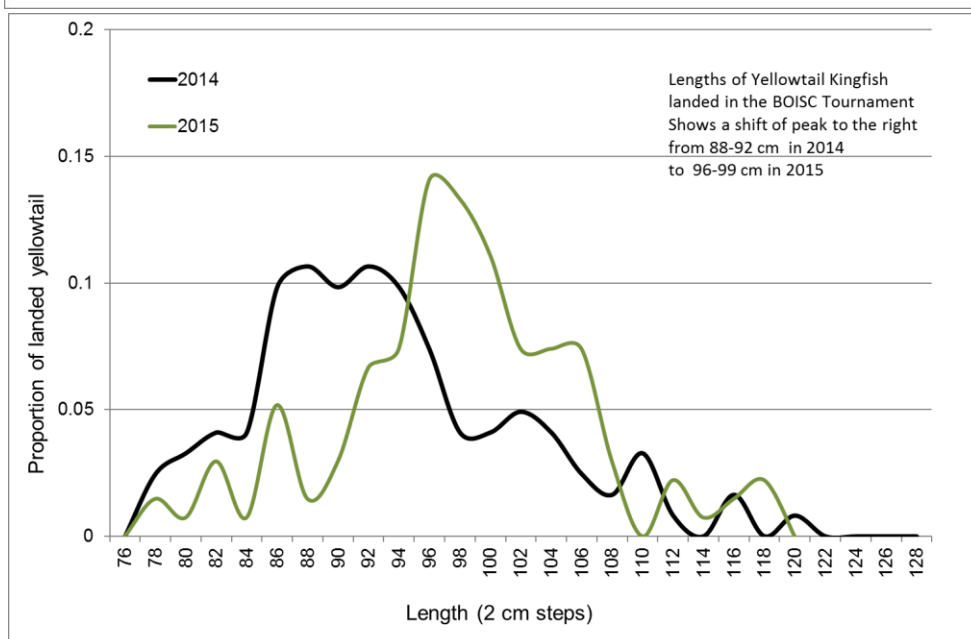
The size of fish in the landed catch steadily increased each year from 2010 to 2013, as shown in Figure 2 below.

The weather conditions in the 2014 BOI Yellowtail Tournament restricted where boats could reasonably go and many of the fish caught were small. These fish appear to be part of a strong new cohort entering the fishery. They show up again in 2015 as 95 to 100 cm fish (Figure 3).

*Thank-you for your support, & good luck with your fishing!*



**Figure 2: The proportion at length by year of yellowtail landed in 2010 (90 fish), 2011 (136 fish), 2012 (173 fish), and 2013 (144 fish) during the Bay of Islands International Yellowtail Tournament. Does not include fish tagged and released.**



**Figure 3: The proportion at length by year of yellowtail landed in 2014 (90 fish), and 2015 (144 fish) during the Bay of Islands International Yellowtail Tournament. Does not include fish tagged and released.**

### Become a Legend

The on-going collection of kingfish lengths is supported by the Bay of Islands Swordfish Club, New Zealand Sport Fishing Council, and LegaSea to enable recreational fishers to gather useful information to help monitor kingfish stocks.

Become a LegaSea Legend now and help maintain our world class yellowtail kingfish fishery

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