



BARRED AND SPECKLED

JAVELIN IN BURNETT RIVER



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REPORT

This report has been prepared by Infofish Australia for the Bundaberg Sportfishing Club - February 2014.

SCOPE

This report examines data available for Javelin in the Burnett River from 1995-Jan 2014:

- ✦ Tagging and recaptures of Barred and Speckled Javelin
- ✦ Tagging effort
- ✦ Locations where fish tagged
- ✦ Movement of fish tagged

DATA SOURCE

Tagging and recapture records from 1995-2013 maintained in the Suntag database at <http://qld.info-fish.net>. Access to the database is limited to authorised users.

AREA MONITORED

Locations in Burnett River where fish were tagged and recaptured are shown using grids on Suntag grid map as shown in *figure 1*:

- ✦ Bundaberg BND (part)



Figure 1: Suntag grid map covering Burnett River

BACKGROUND

Following one of the largest floods on records in the Burnett River in 2013 there has been an upsurge in the number of Barred Javelin tagged in the river.

SOME OBSERVATIONS

Based on the data collected on Barred and Speckled Javelin from 1995-2014 the following observations are made:

- ✦ The largest number of Speckled Javelin were tagged from 2000-2004 while the largest number of Barred Javelin were tagged in the current period 2010-2014 (incomplete).
- ✦ Recapture rates are low with Barred Javelin at 2.5% and speckled Javelin at 1.5%.
- ✦ From 2000-2004 the tag rate for both Barred and Speckled Javelin was around 3.5 fish per tagger per day.
- ✦ From 2010-2014 the tag rate for Barred Javelin is 3.3 and for Speckled Javelin is 2.1 fish per fisher per day.
- ✦ There has been a steady increase in the number of Barred Javelin over 300mm tagged rising from 0 in 1995-1999 to 1.5 fish/day in 2010-2014 with the first fish over 400mm being tagged in 2010-2014.
- ✦ The number of Speckled Javelin tagged per fisher per day has declined from 3.5 from 2000-2004 to 2.1 from 2010-2014 with a decline also in the number of fish over 300mm tagged from 0.2 to 0.1 fish per tagger per day over that time.
- ✦ There was an upsurge in the number of Barred Javelin tagged from 200-300mm following minor flooding in the river in 2003 and an upsurge in the number tagged from 200-400mm following the flooding in 2013.
- ✦ Flooding appears to have an effect on recruitment of Barred Javelin but spawning is likely to have occurred at least 1-2 years prior to flooding (more work needed).
- ✦ Flooding appears to have less effect on Speckled Javelin recruitment than for Barred Javelin.
- ✦ Barred Javelin appear to have benefited more than Speckled Javelin from recent wet years.
- ✦ Both Barred and Speckled Javelin use the whole estuary part of the river from the Ben Anderson weir to the mouth with a number of areas where more fish of both species have been tagged.
- ✦ Recaptures of fish have all been made within the river with no fish being recaptured outside the river.
- ✦ Indicative growth for Barred Javelin is 55mm/first year and for Speckled Javelin is 31mm/first year.

MORE INFORMATION WILL HELP

The following information that can be collected by club members will help improve understanding of Javelin in the river:

- ✦ Measuring and reporting of length of Javelin kept.
- ✦ Recording details of small Javelin caught in castnets or baitnets (length, location, data and photo).

FISH TAGGED AND RECAPTURED

From 1995-2014 there were 1,326 Barred Javelin with 33 (2.5%) recaptures and 1,241 Speckled Javelin tagged with 18 (1.5%) recaptures. *Figure 2* shows the number of fish tagged in each 5 year period (2010-Jan 2014 in progress) and recapture rates. *Figure 3* shows the number of fish tagged per fisher per day when fish were tagged.

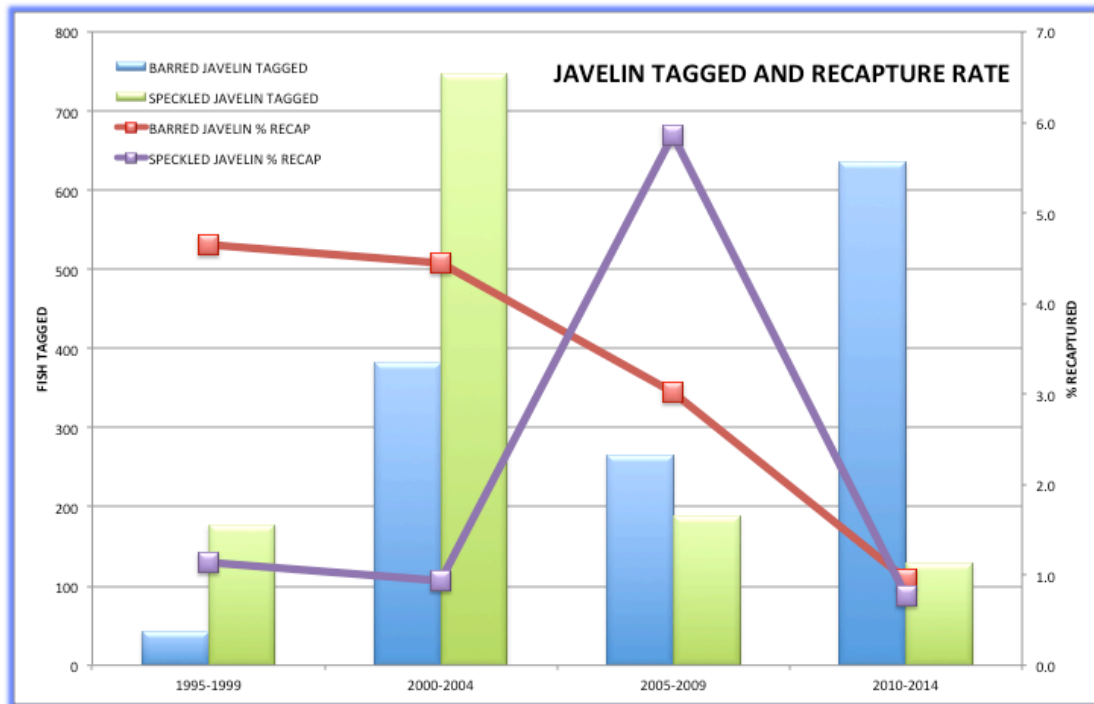


Figure 2: Number of fish tagged each 5 year and recapture rate 1995-2014

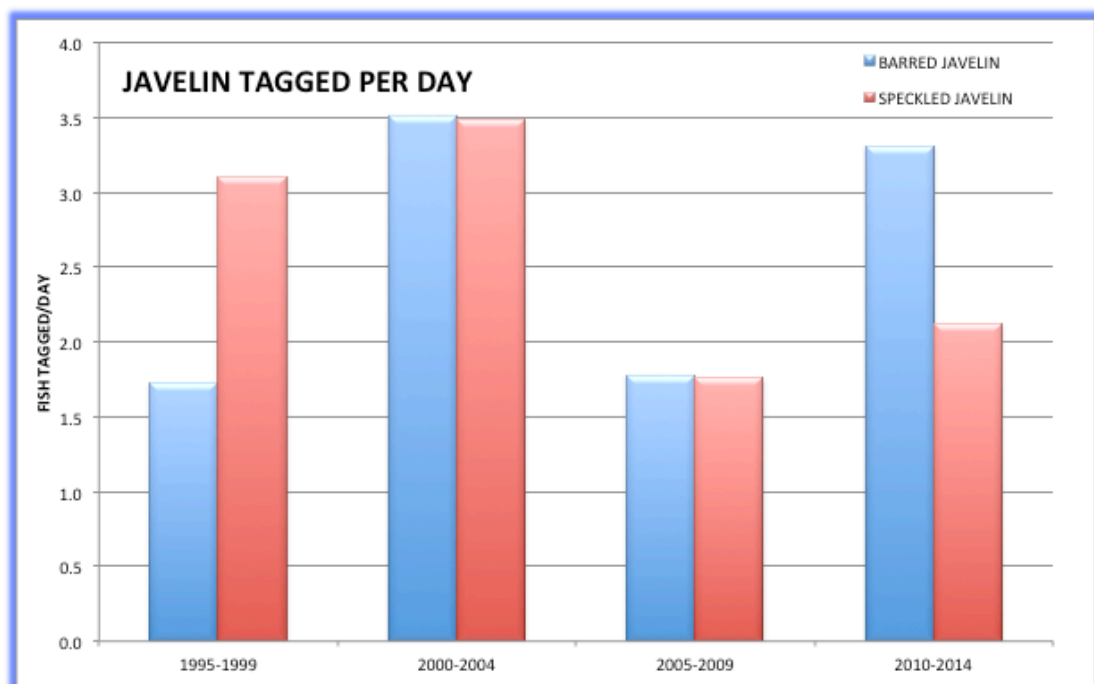


Figure 3: Fish tagged per fisher per day 1995-2014

Figures 4 and 5 show the number of Barred and Speckled Javelin tagged per fisher per day from 1995-2014. For Barred Javelin the number of fish tagged by fisher per day over 300mm has steadily risen from 0 fish/day in 1995-1999 to 1.5 fish/day in 2010-2014. Fish tagged over 400mm were first recorded in 2010-2014. For Speckled Javelin the number of fish tagged over 300mm has ranged from 0.2-0.1 from 2000-2004 to 2010-2014. No fish have been tagged over 400mm.

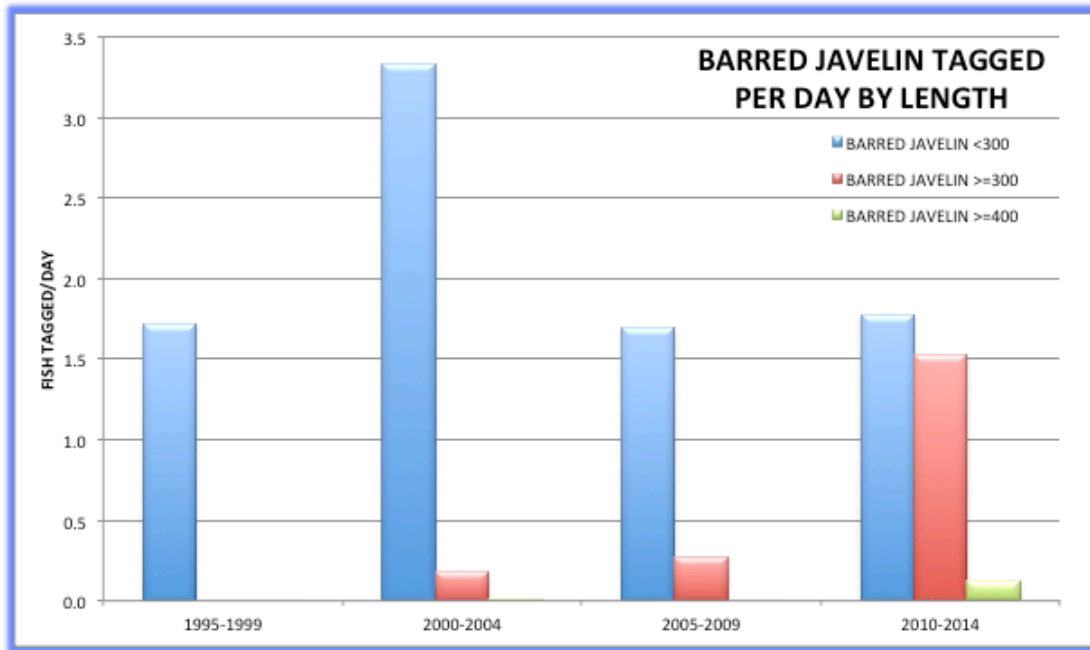


Figure 4: Barred Javelin tagged per fisher per day by length 1995-2014

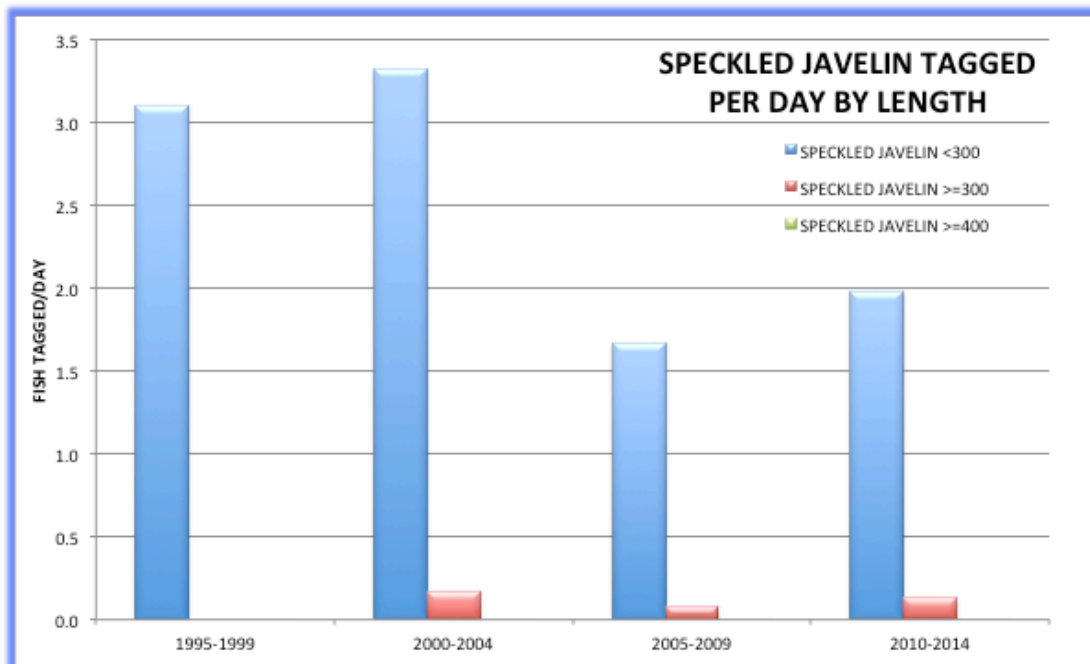


Figure 5: Speckled Javelin tagged per fisher per day by length 1995-2014

JAVELIN AND RIVER FLOWS

Figures 6 and 7 shows the number and length of Barred and Speckled Javelin tagged over time and river flows from 1995-2014. There was an upsurge in the number of Barred Javelin tagged from 200-300mm following minor flooding in the river in 2003 and an upsurge in the number tagged from 200-400mm following the flooding in 2013. Flooding appears to have had less effect on Speckled Javelin recruitment.

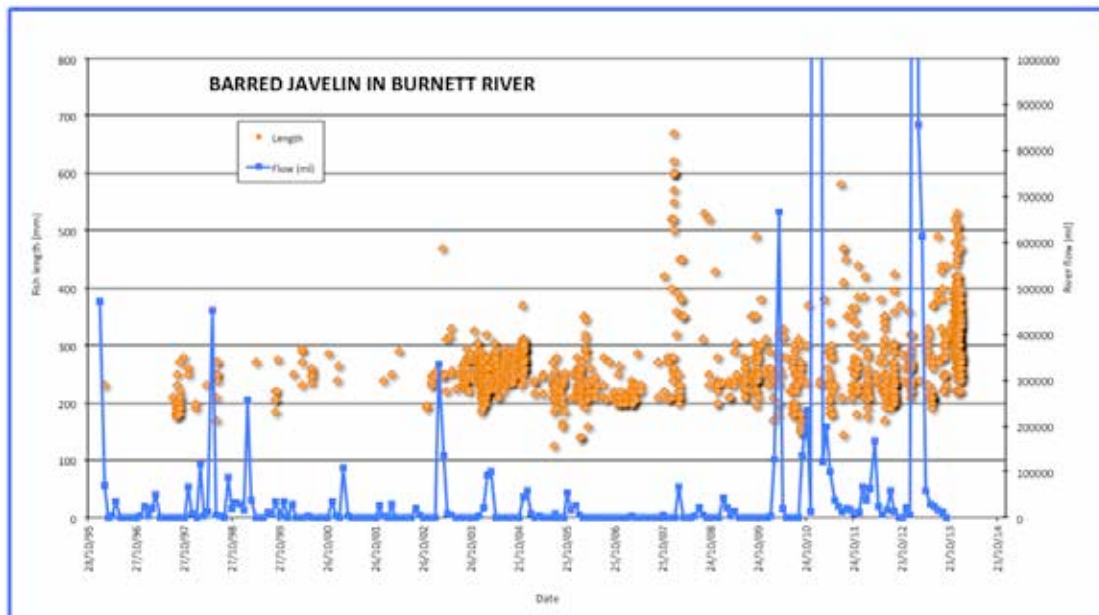


Figure 6: Timeline of length of Barred Javelin tagged and river flows 1995-2014

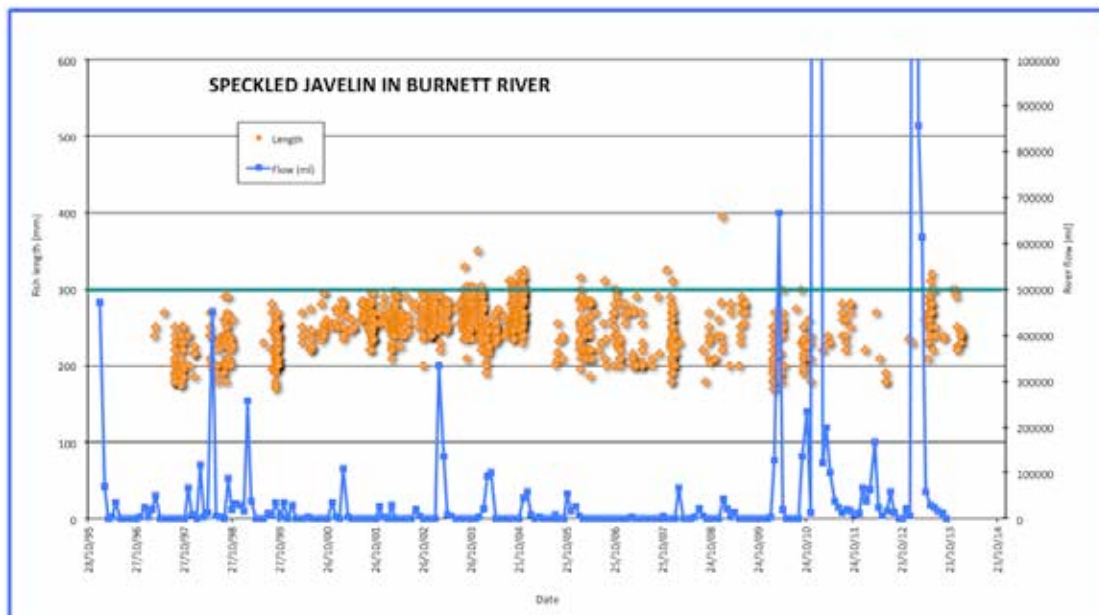


Figure 7: Timeline of length of Speckled Javelin tagged and river flows 1995-2014

LOCATIONS BARRED JAVELIN TAGGED AND RECAPTURED

Figure 8 shows the locations where Barred Javelin were tagged in the Burnett River from 1995-2014. There were 44 grids where fish were tagged with 4 grids where over 100 fish were tagged. Figure 9 shows where fish tagged were recaptured with all fish being recaptured in the river within 6 months of being tagged.

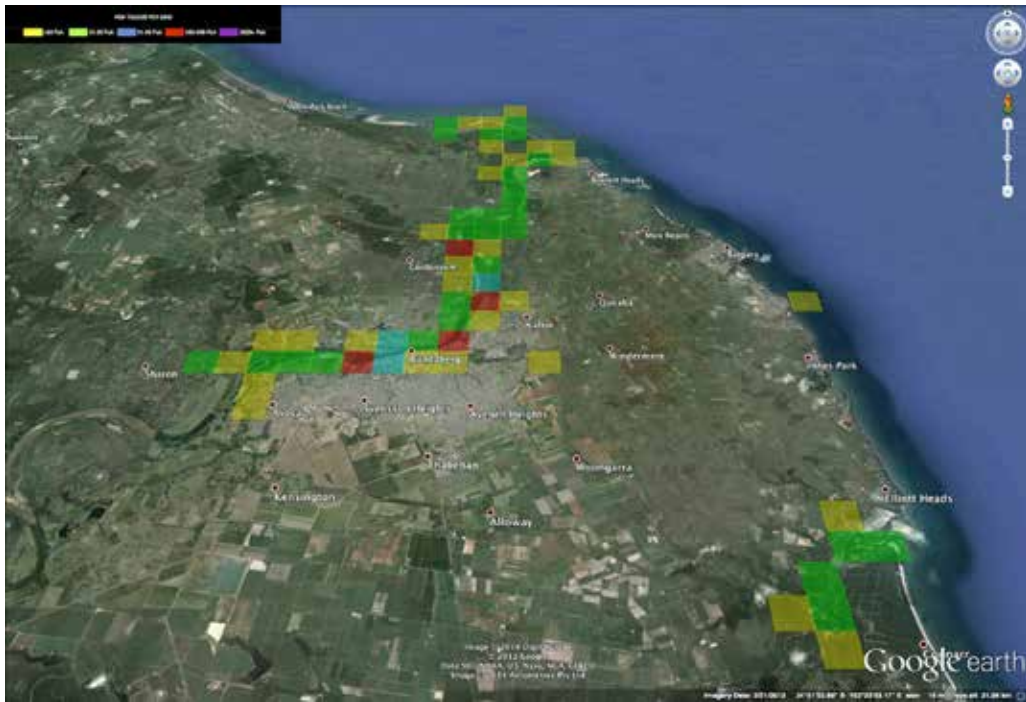


Figure 8: Locations where Barred Javelin tagged 1995-2014

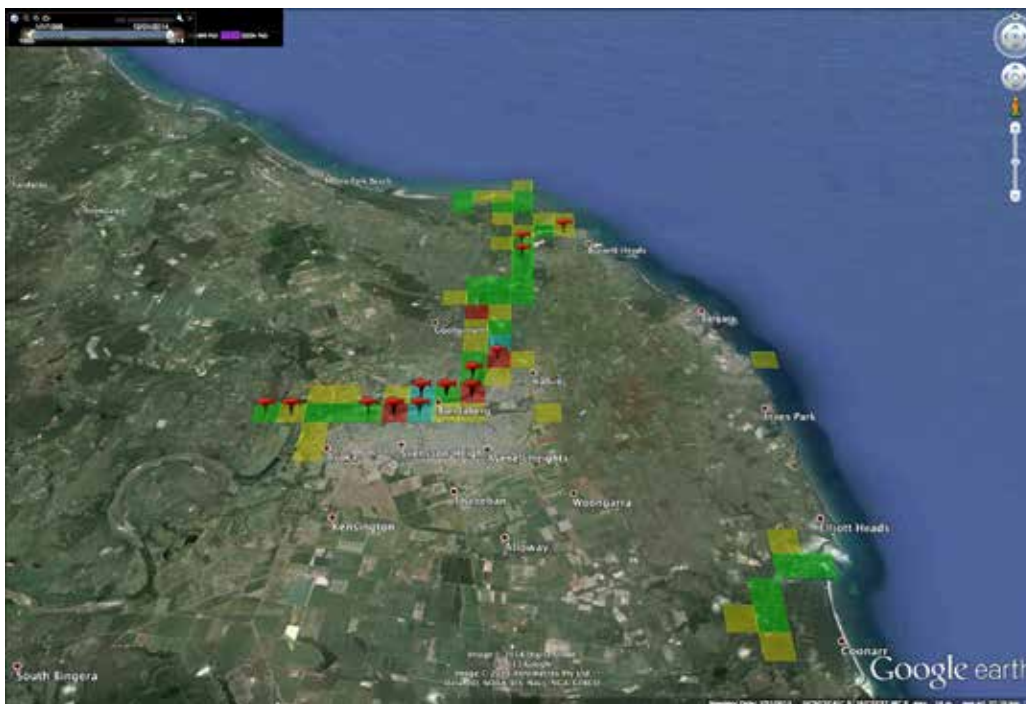


Figure 9: Locations where Barred Javelin recaptured 1995-2014

LOCATIONS SPECKLED JAVELIN TAGGED AND RECAPTURED

Figure 10 shows the locations where Barred Javelin were tagged in the Burnett River from 1995-2014. There were 34 grids where fish were tagged with 4 grids where over 100 fish were tagged. Figure 11 shows where fish tagged were recaptured with all fish being recaptured in the river. Of the 18 recaptures 16 were made within a year of being tagged. One fish was recaptured after 2.4 years and another after 3.6 years.

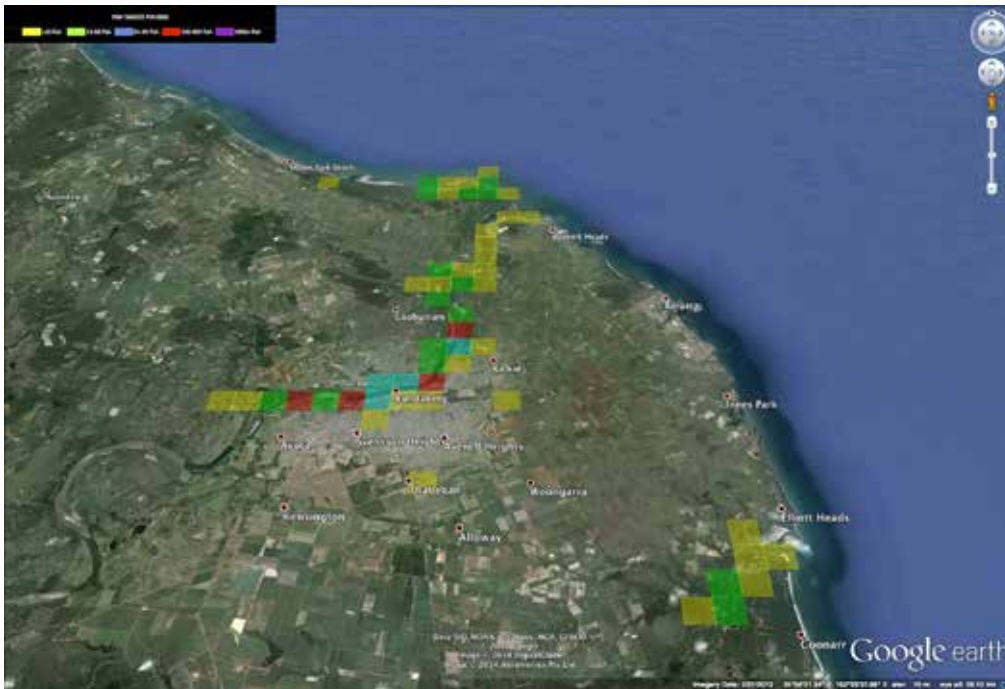


Figure 10: Locations where Speckled Javelin tagged 1995-2013

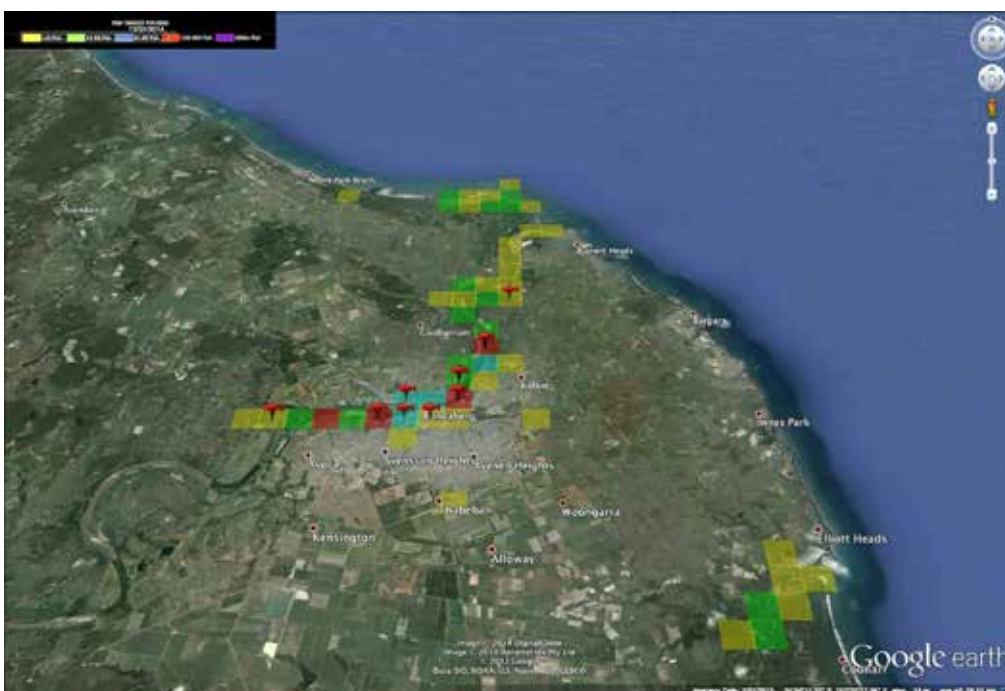


Figure 11: Locations where Speckled Javelin recaptured 1995-2013

JAVELIN GROWTH

There are insufficient data from recaptures in the Burnett River to provide an estimate of growth. Data from all recaptures were used to provide an indicative growth. There were 144 Barred Javelin and 77 Speckled Javelin recaptures where the fish were out for 90 or more days and showed positive growth. *Figure 12* shows the indicative growth rate for Barred (55mm/first year) and Speckled Javelin (31mm/first year).

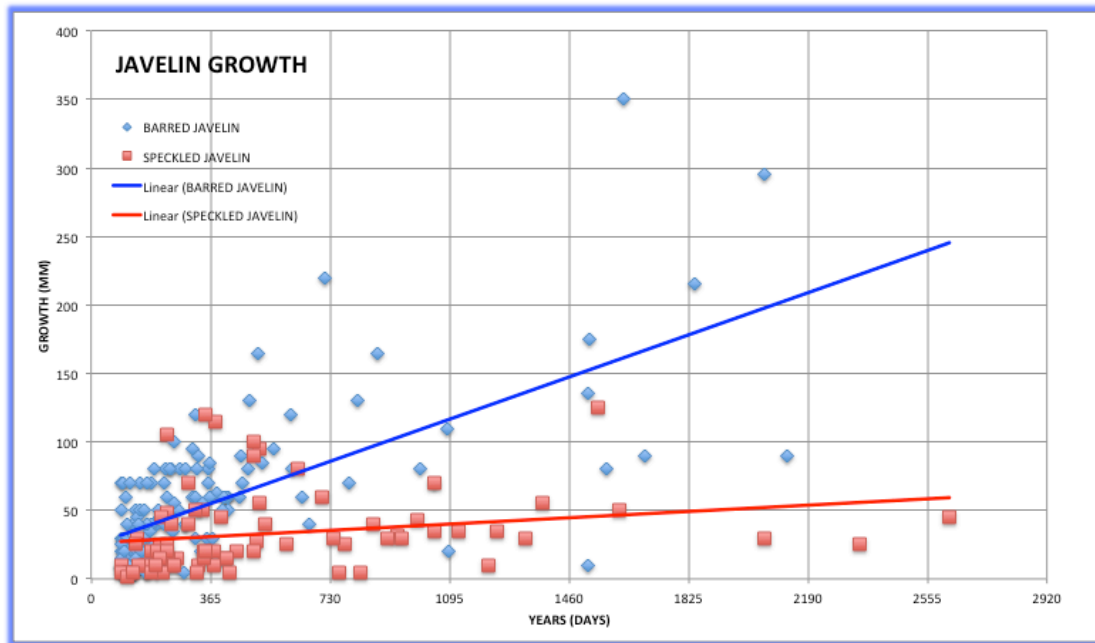


Figure 12: Growth of Barred and Speckled Javelin