

Shag interactions with commercial rock lobster pots in the Chatham Islands



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Methods

- Interview survey, with design input from DOC and CRA6 Industry Association
- 22 fisherman interviewed
- 10 at CRA6 organised meeting, 9 face to face, 3 follow up phone interviews
- Fishing effort data from MAF fisheries assessment report (Starr 2011)
- Shag population data from Debski (2012) – previously reported today

Chatham Island shag



- Endemic Chatham Island species
- 842 pairs counted in 1997/98.
- 355 pairs in 2011
- = 58% decline

Chatham Island shag



- Endemic Chatham Island species
- 388 nests in 2011
- 649 nests in 1997/98
- 388 nests in 2011

- = 40% decline

Fishing effort

- From the 1979-80 fishing season to the 1998-1999 season an average of 48 vessels (range 39-59)
- Declined to 34 vessels since the 1999-2000 season
- Annual number of pot lifts has remained relatively stable with an average of 285,300 pot lifts per season (range 163,500 – 428,000)
- Therefore fewer boats now working in the Chatham Islands, but they are working the same amount of gear.

Shag interactions

- 9 fishermen (40%) acknowledged catching shags
- All reported bycatch involved Pitt Island shag
- Fishermen reported low levels of bycatch during their career, with between 1 – 5 shags caught
- All involved shags being found dead in pots when working gear

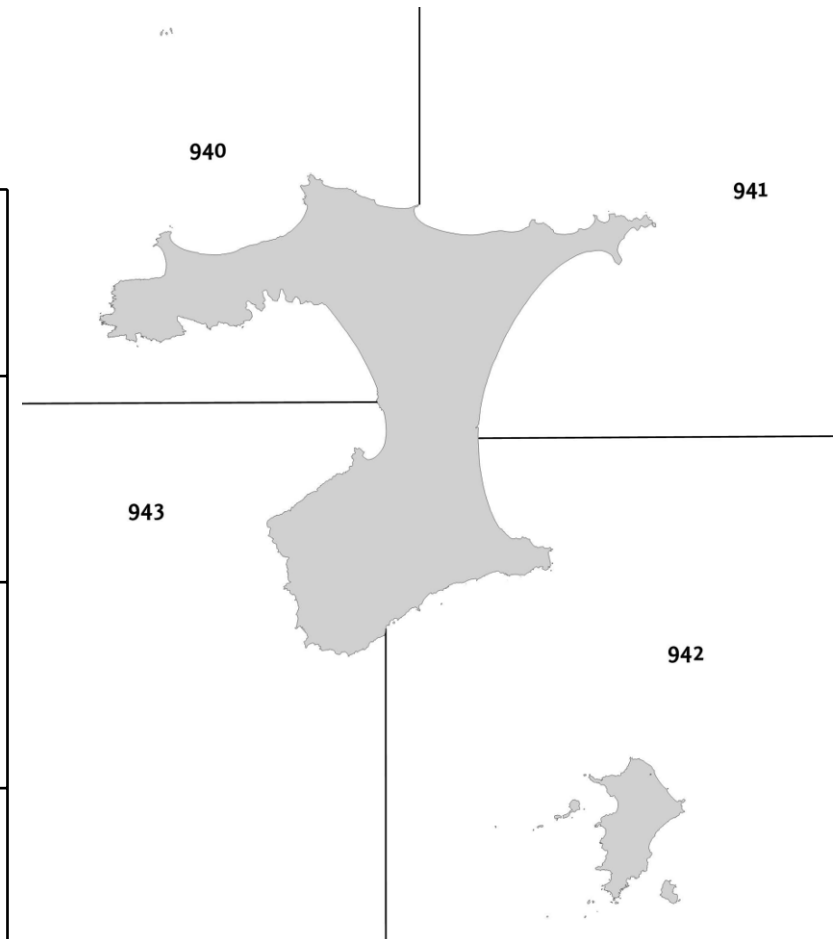




Shag interactions

Bycatch per CRA6 area

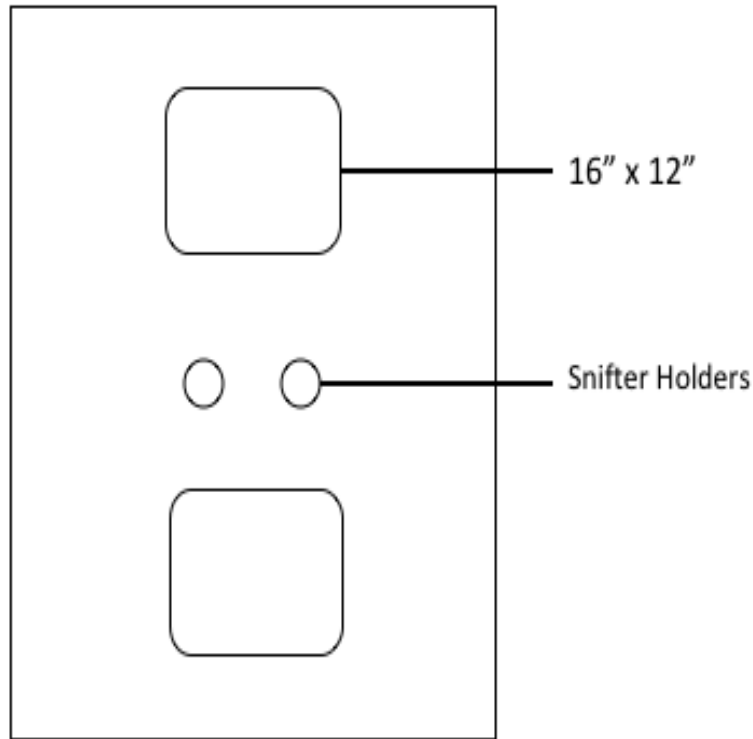
	940	941	942	943	Total
Shags caught	5	3	12	0	20
Fishing effort %	26	27	35	12	100
1997 Shag numbers	250	48	340	80	718



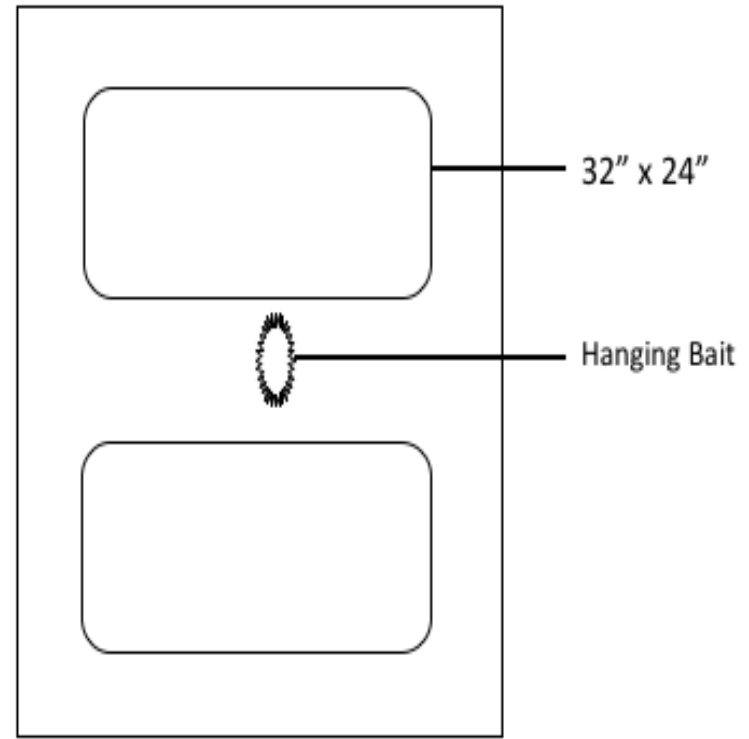
Shag interactions

- All caught >5 years ago, most >10 years
- Shag bycatch occurred in shallow water when pots brought in close to follow rock lobster January/ February
- Hanging bait used
- Large necked pots with large mesh used
- Fishing methods changed in CRA6, especially pot design and baiting method.
- These changes reported to have eliminated bycatch

Shag interactions with pot fishing



5' x 4'



5' x 4'

Shag interactions rates

- Limited international data on seabird interactions with pot fisheries
- Chatham Islands-1 capture/150,000 pot lifts (this study)
- South Australia- 1 capture/45,000 pot lifts
- Florida-1 capture/ 4,250 pot lifts
- Baja- 1 capture/ 137 pot lifts
- No global mitigation methods developed for seabirds
- CRA6 has developed a Code of Practise

CRA6 Code of Practise

- Don't set pots alongside nesting sites; don't set pots in the vicinity of mating birds.
- Don't set pots when shags are sitting on the surface close to the boat.
- Don't use tied baits.
- Where possible use frozen baits if setting pots in vicinity of shag colonies.
- Watch pots carefully as they are set; be prepared to recover a pot if you see a bird dive after it.
- Release the bird after re-setting the pot.
- Last resort – use cover panels on pot necks which release after one/two hour soak time. Timed release units or even candy sticks could be deployed to activate the cover panels. (Based on the certainty that only way a shag can enter a pot is to dive through the neck)
- Use mandatory non-fish by-catch reporting forms if any fishing-related seabird mortalities are experienced.

Recommendations

- Continued use of pots with a narrow neck, small mesh size and only bait with snifters.
- Review and update the CRA6 Seabird Interaction Code of Practise.
- Produce a “shag fact sheet” for the CRA6 area and distributed to CRA6 fishermen and quota owners.
- Initiate an in-depth research project into breeding ecology and foraging behaviour and range of Chatham Island and Pitt Island shags.

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