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Special thanks to Mike Wilkinson and Heather McCloud for images No 51 and 62 and John Wattie for No's 63 and 64.

I met a failed grebe in Roy's Bay
Lake Wanaka just under three
years ago and thought to do
something about
it.....



Podiceps cristatus australis

Southern crested bumlegs

Southern crested grebe

Cosmopolitan as a family.

Fossil record 40mya

Closest living relatives

Penguins/Albatrosses

Probably the most aquatic of all birds

Only in the South Island-Extinct NI

<600 birds in NZ (**Nationally threatened**)

“The SCG is not a common bird and its numbers are declining. In 1980 it was estimated that there were 250 adults. Natural floods dislodge nests, but most interference is by humans, and nests are disturbed by boaters, anglers and holiday makers. Nests are lost to the clearing of lakeshores and predators take their toll”.

Birds of NZ 1985 pop 250

Field Guide 2004 Pop 350

Notornis 2004 Pop 350 (L. Wanaka 2)

In press 2014 Pop 600 (L Wanaka 6-8)

The why

- Conservation issue- Classified as rare, vulnerable and threatened
- Remarkably little known about this species in NZ
- Just two major studies in NZ both ex Otago O'Donnell (1980) and Newton 1999-2001
- Secretive nester-very sensitive to intrusion.
- Highest recorded chick survival in NZ 0.3-0.4chicks/bird/yr
- Challenge. Was it possible to reverse breeding failure around Roys Bay and the marina and encourage birds to breed
- The need to understand the breeding strategy and why it is so specialised.

The How

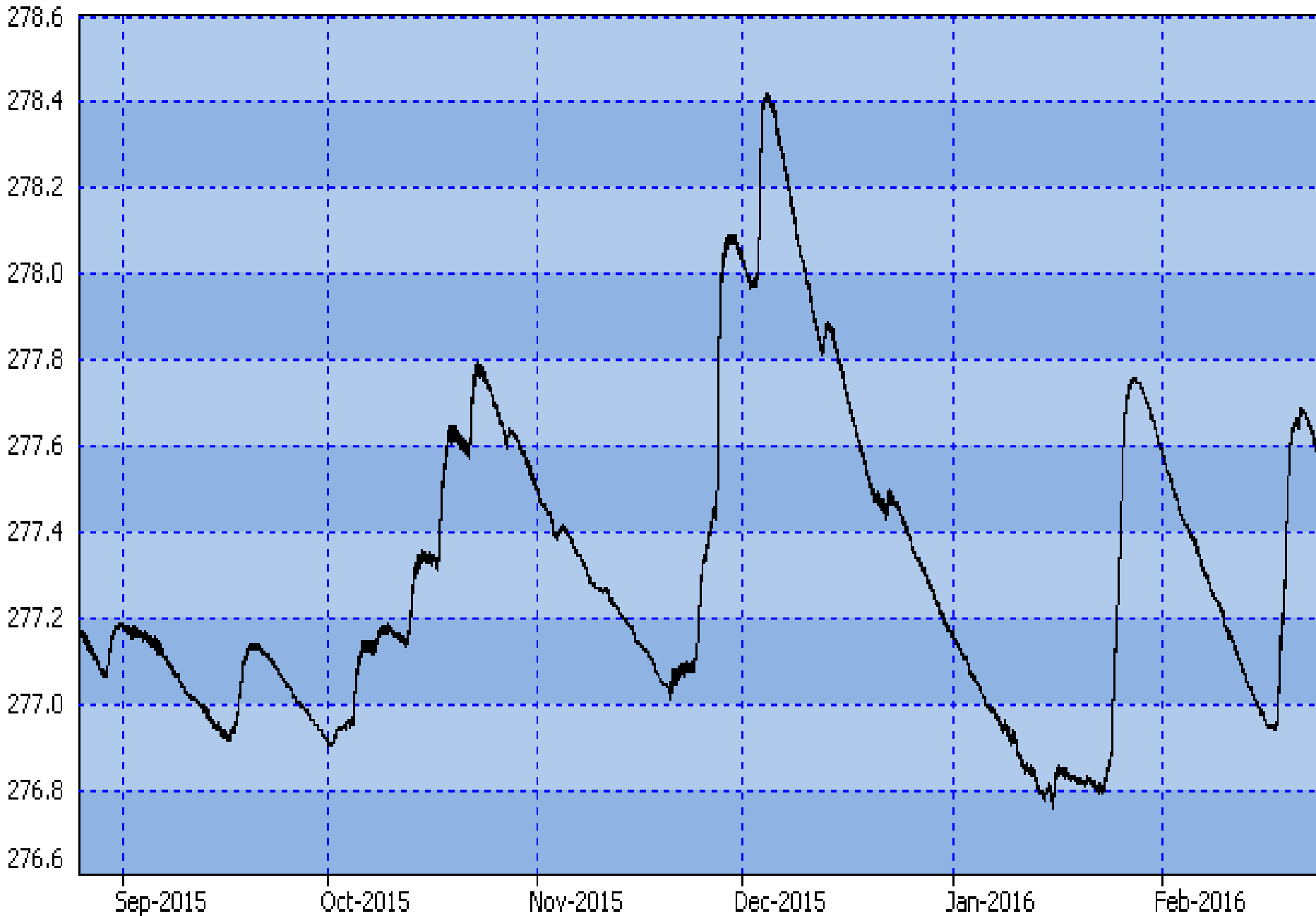
- Finding them so that I could study them-newspaper article.
- Challenge-understanding these birds and what makes them tick
- Recorded as difficult to work with.
- Literature search as much as possible on early work and found George Chances little note on Grebes in Lake Hayes 1996-97.
- Set out to look at mortality factors in grebes
- Kayaking Lake Hayes, Wanaka, Dunstan
- Concentrated on Lake Hayes, kayaked over 20 times, population dynamics, behaviour, territoriality, nest site tenacity, breeding, ecology etc.

- the how cont
- Why do they do what they do?
- Effectively unable to walk on land – vulnerable to terrestrial predators.
- Compromise is to nest on floating weed masses attached to branches, roots or aquatic vegetation-nest must stay in the same place
- Thus this is basically an effective antipredator strategy
- However the advantage is lost if water levels changes in either direction by whatever means. (Dunstan)
- It works most times, but the ultimate habitat appears to be of two types-overhanging trees (Willows) & or reed beds (Raupo etc.)

the how cont:

- Significant mortality factor is fluctuating water levels.
- Wanaka has very little suitable habitat < 1% of the shoreline
- Build floating platforms and attach them to the marina. Controls for lake level fluctuations, predation and vandalism.
- Support from boat owners, Marina Board, Peter Marshall
- Make people more aware of the natural history of this lake and thus better protect it.
- Could it be used as an indicator species of lake quality?

Lake Wanaka



Last value was 277.592 m above msl at 23-Feb-2016 20:00:00



FUEL
WANAKA MARINA LIMITED
FOR ALL INFORMATION CONTACT
HOTEL & RESTAURANT
03 542 1000



- social
- inquisitive,
- curious,
- bold,
- confident,
- challenging
- complex
- beautiful

Stats stuff

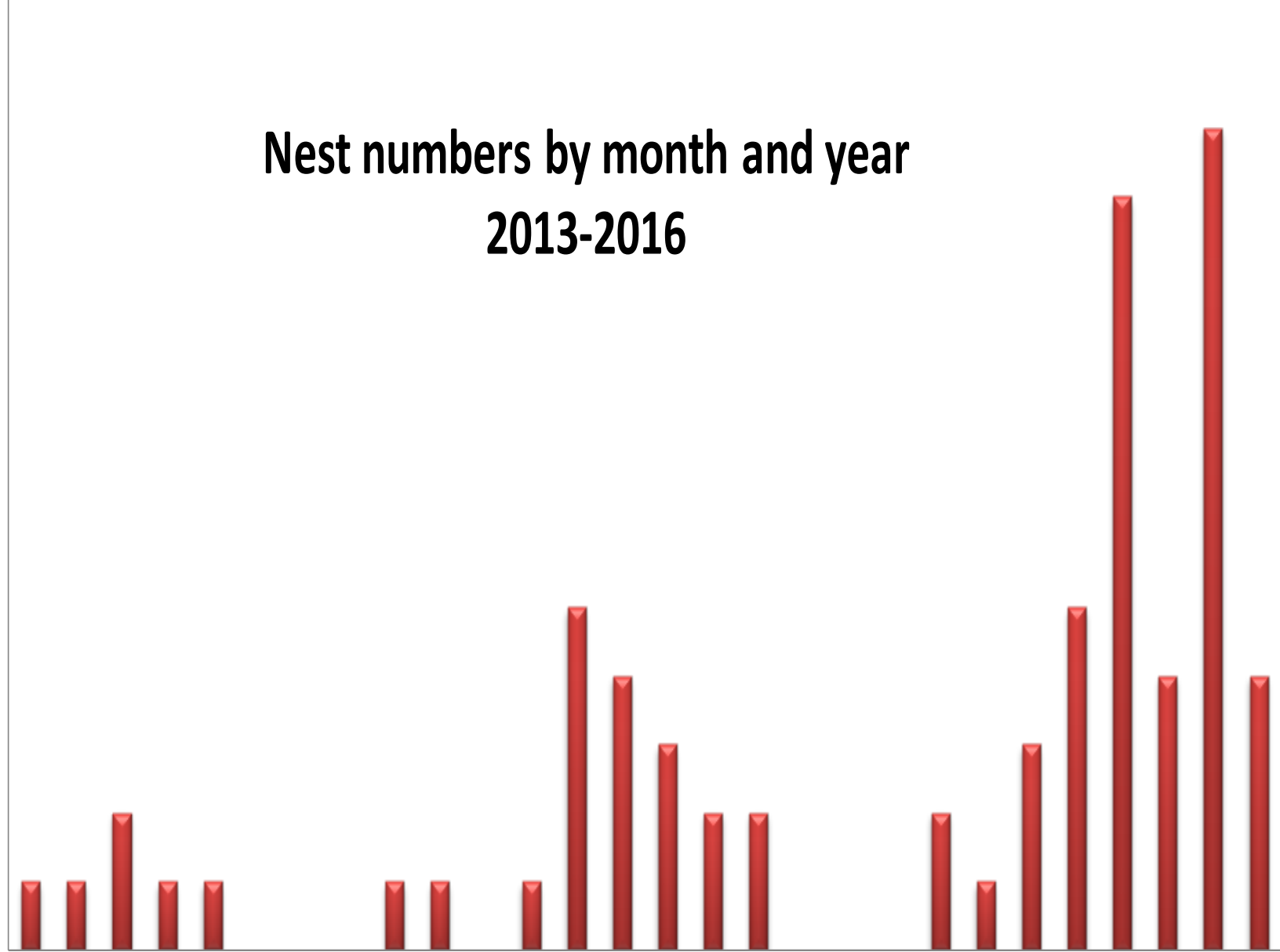
- Breeding October-February
- But in Wanaka mid –winter-March!
- Mortality, flooding/stranded/predation
- Clutch size 3-5 eggs
- Incubation 23-26 days
- Asynchronous hatching
- Started with one pair-social facilitation- 1-2-4 (6)-19-40+ pairs
- Hatched/Fledged 2013-2015 31 chicks,
- 2015-2016 87chicks from 40+ clutches of which 7 were total failures.
- Total number of chicks 118

Nest numbers by month and year 2013-2016

Nest numbers

12
10
8
6
4
2
0

O N D J F M A M J J A S O N D J F M A M J J A S O N D J
2013 2013-2014 2014-2015















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YAMAHA V 140















2













**The problem-how do you get them to nest
where you want them to nest?**

The Theory.

A supernormal stimulus or superstimulus is an exaggerated version of a stimulus to which there is an existing response or tendency, or any stimulus that elicits a response more strongly than the stimulus for which it evolved.

You build the nest- bigger is better.













A four year study carried out in the Ashburton Lakes in the 1980's recorded that only 17 of 28 pairs tried to breed. They laid 37 eggs of which only 8 hatched and of those 8 chicks, 7 died in the first week.

(C.F.J O'Donnell 1982)

Another study carried out in Lake Pearson in 1999/2000 had a survival rate of 33% of eggs hatched and in 2000/2001 only 4% of chicks survived.

(G.H.D.Newton 2001)



Giraffe
Manakia
Sports























The second best thing to
see in Wanaka

in

December 2014

“Great Crested Grebes on Lake Wanaka” and up

5-Day South Island Tour from Christchurch

[See more tours on Viator](#)

Ranked #2 of 48 things to do in Wanaka

[468 Reviews](#)

Certificate of Excellence

Type: [Ski & Snowboard Areas](#), [Bodies of Water](#), [Outdoor Activities](#), [Nature & Parks](#)

Activities: Skiing

[More attraction details](#)

http://www.tripadvisor.co.nz/ShowUserReviews-g612500-d301185-r246482499-Wanaka-Wanaka_Otago_Region_South_Island.html#



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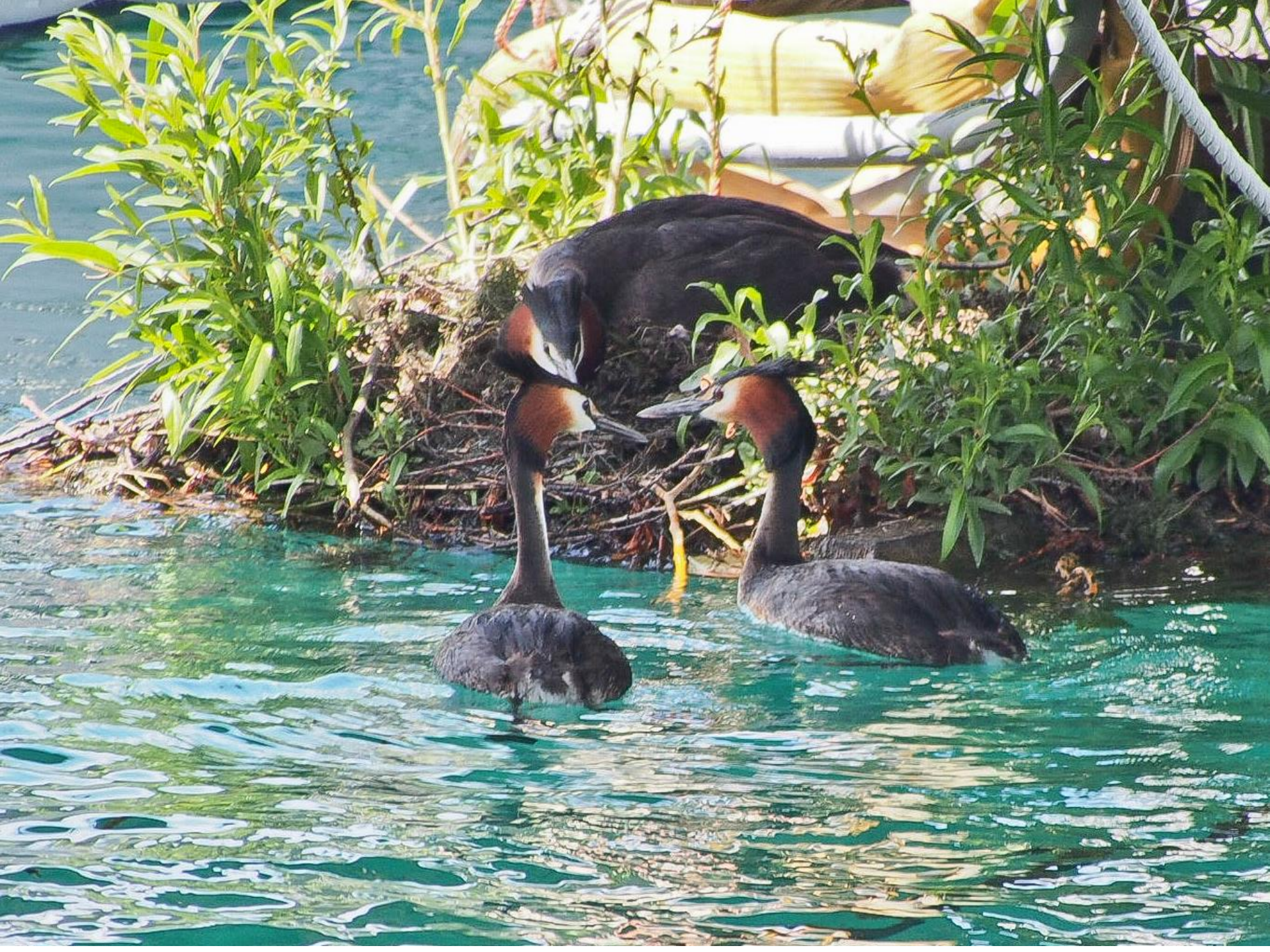
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Punch-up













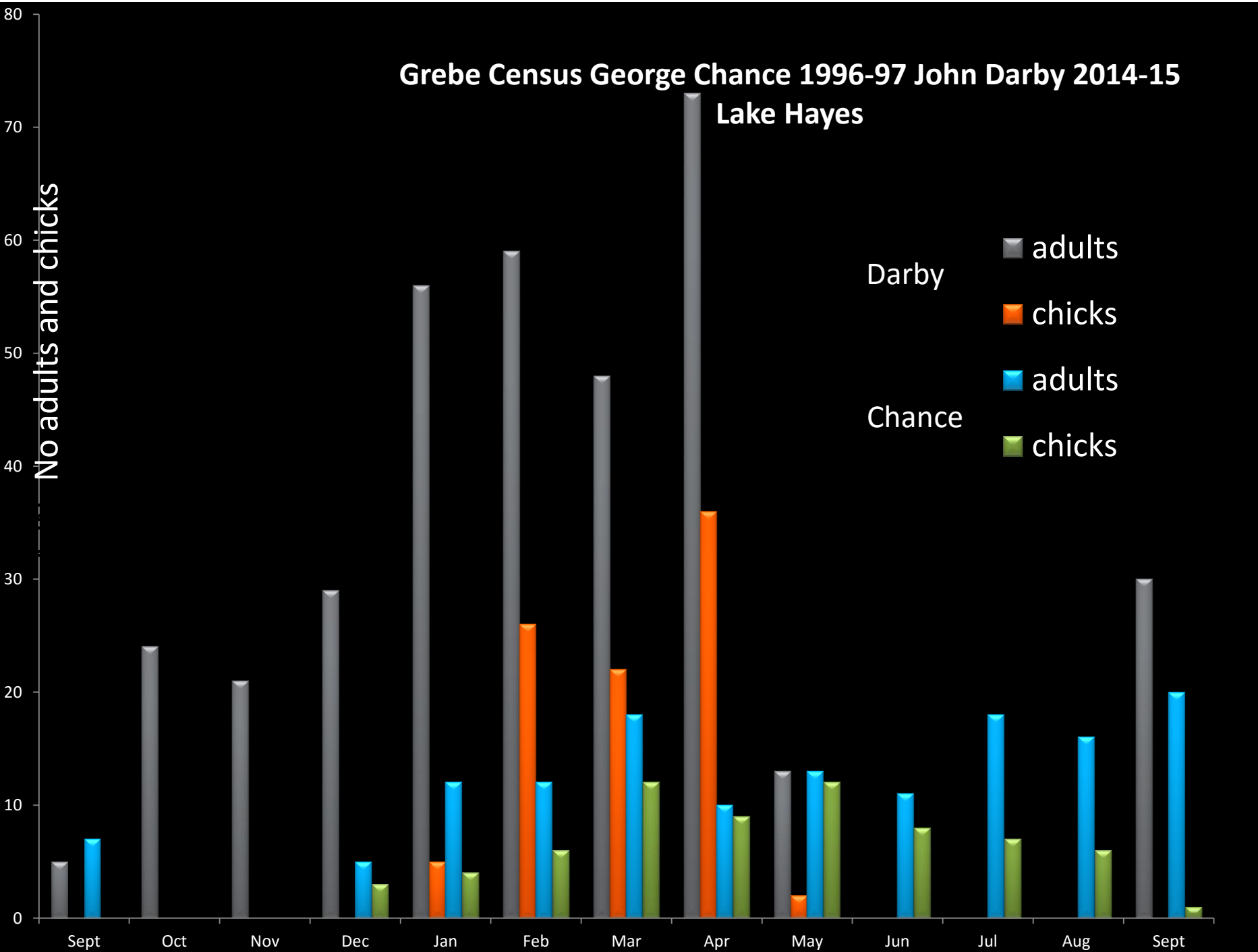
LARSON



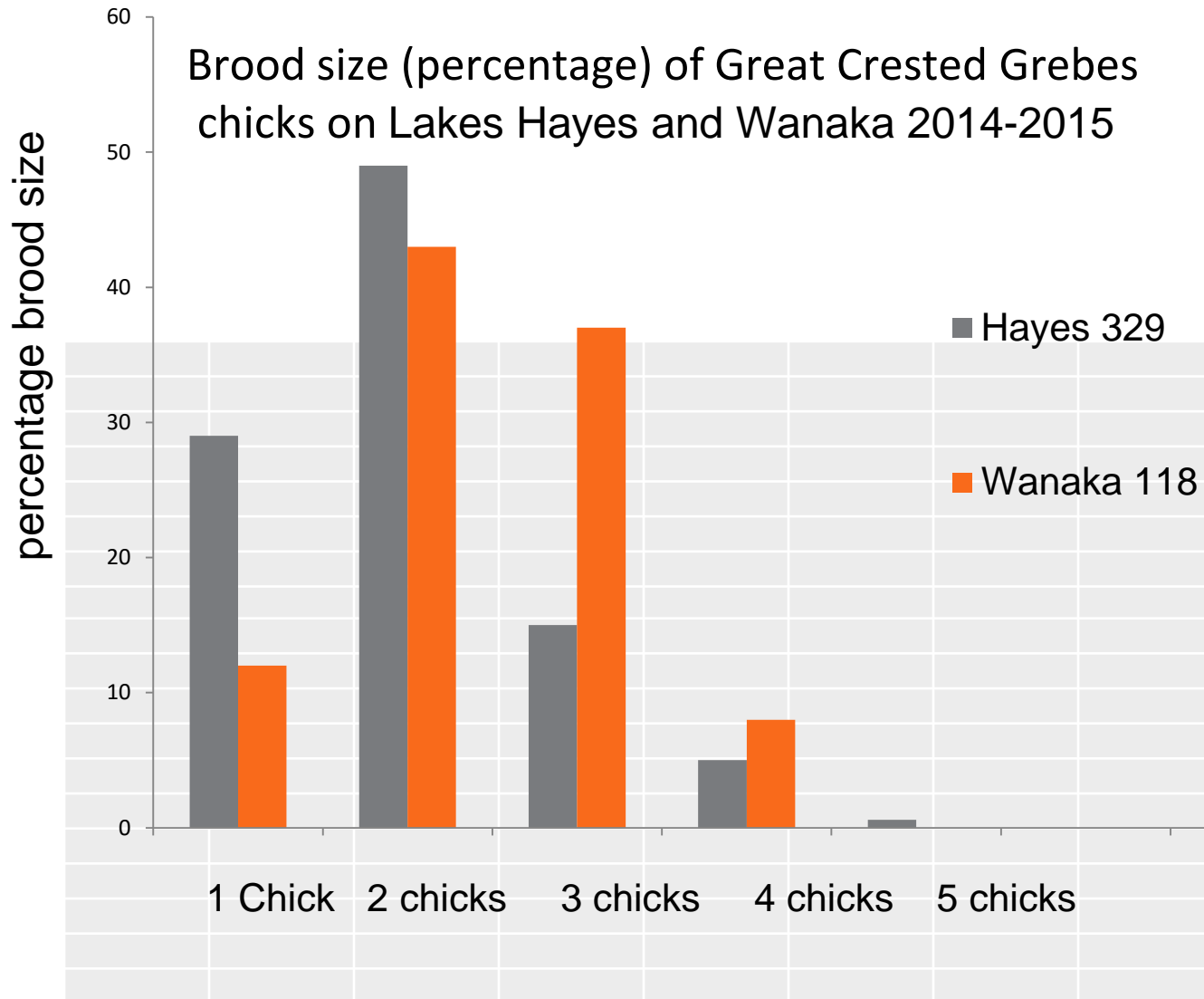




Grebe Census George Chance 1996-97 John Darby 2014-15 Lake Hayes



Brood size (percentage) of Great Crested Grebes chicks on Lakes Hayes and Wanaka 2014-2015







Eye Flukes in Bully Eye.mp4
Eye Flukes in Bully Eye.mp4



“A good glass, a notebook, some
patience and a spare fortnight in the
spring – with these I not only managed
to discover many unknown facts about
the crested grebe, but also had one of
the pleasantest of holidays,

‘go thou and do likewise.’

Julian Huxley 1914

Whew !

Done

THANK YOU



GREBE DIARY 21/10/2015 7

Retired zoologist John Darby keeps us up to date on the latest grebe hatchings at Lake Wanaka.

Started this programme, I did not set targets other than it was possible to get a pair of Grebes to breed quite quietly, but I must admit with a bit of a flourish I hit the 50 mark (actual figure 52) by way of chicks hatched at the marina this last week. The boost came after I found four of their five eggs. Nest 3 had high ambitions

also incubating for a while but lost one of its chicks from the nest. It was a bit of a back in the nest. He dove and paddled out to the nest bowl.

Another aspect of the grebe life is that so many people, both human and or natural history, are interested here. That has never been the case of the Wanaka Phalarope platform. We will have numbered 14.

10.15



A beautiful shot of the grebes on Lake Wanaka, taken by Mike Wilkinson

Retired zoologist John Darby keeps us up to date on the latest grebe hatchings at Lake Wanaka.

The good news is that, since July of this year, 16 chicks have hatched, making a grand total of 49 since this

thewanakasun.co.nz

GREBE DIARY 12/11/2015 (10)

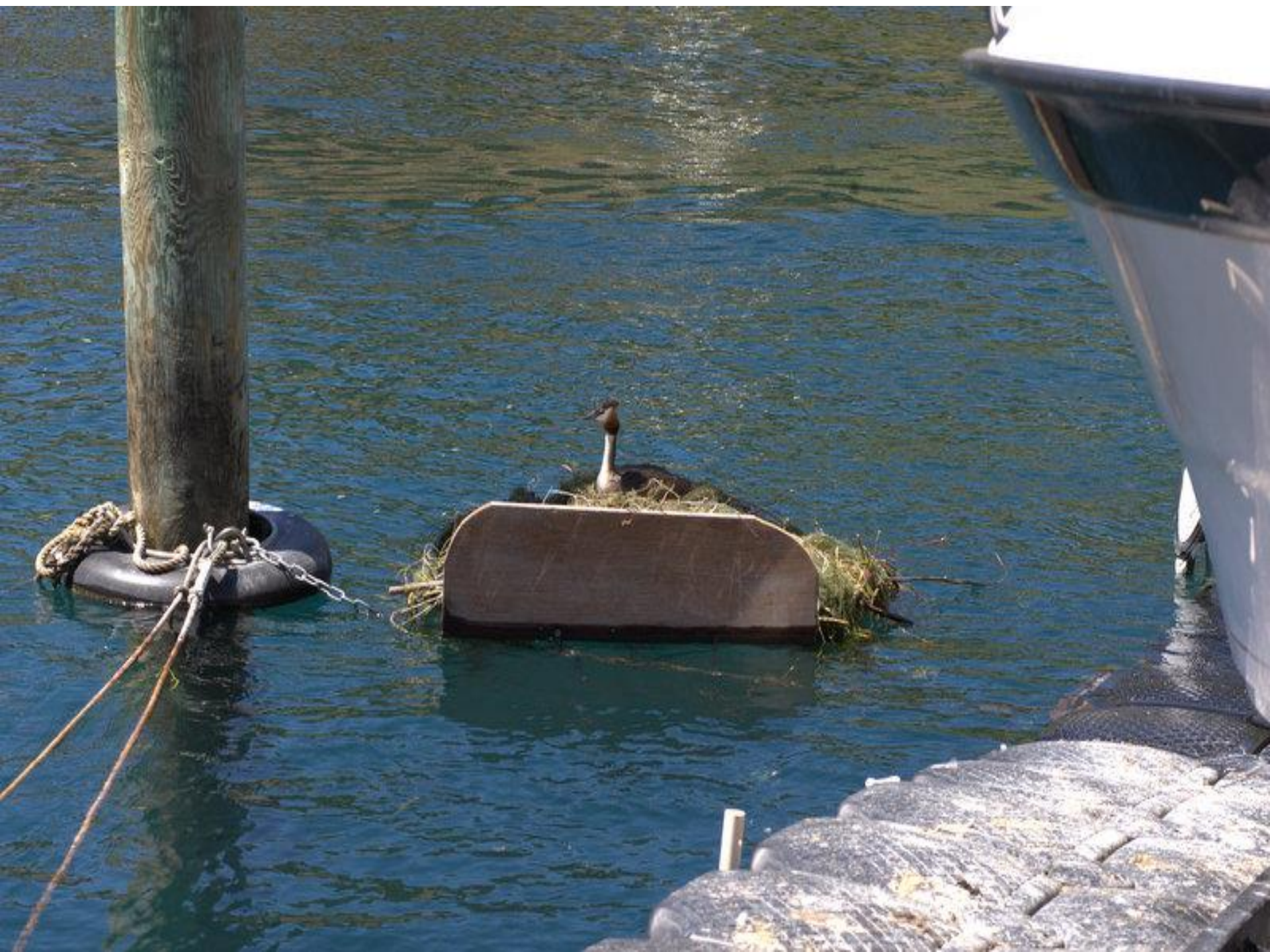
Retired zoologist John Darby keeps us up to date on the latest grebe hatchings at Lake Wanaka.

Nest 8 has hatched three of its four eggs and, just like the birds in nest 1, one egg has been left unhatched. I am not at all surprised, simply because



... (making a grand total of 49 since this year) ... (three chicks from the first brood and a pair) with the intention to start another brood ... and territorial disputes (where chicks remained up to two months) they are mostly for their own protection taken over by determining the sex as laid on the first day ... created a nest on a rock ... attention was to rescue the chicks from huge winds and storm ... and both the nest and the chicks were being by the storm and ... October, we have our first set of grebe eggs.







The latest diary from John Darby

















