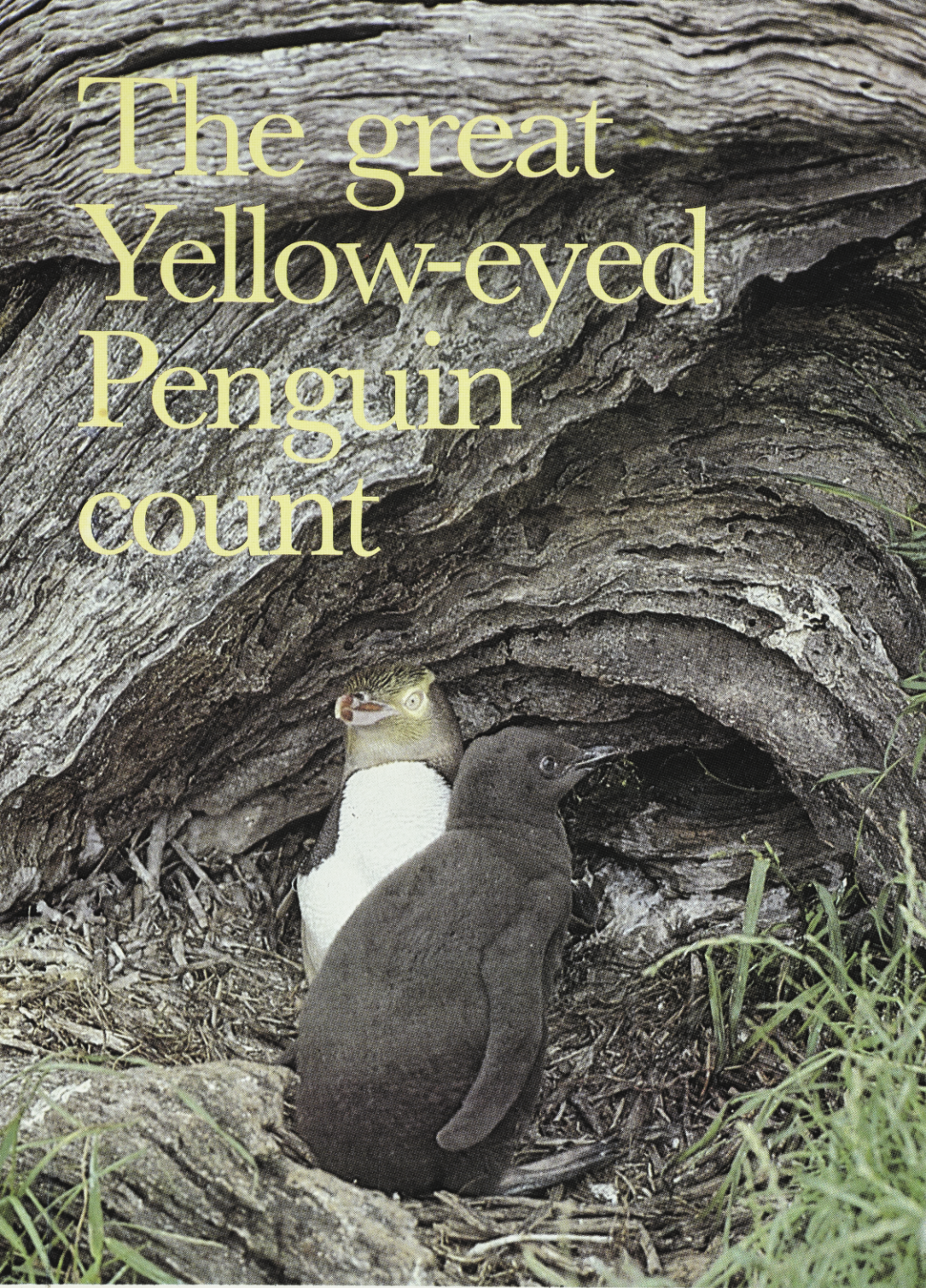


# The great Yellow-eyed Penguin count



tant distinction between adults (potential breeders) and juveniles (definitely not breeders). And that is why we have counted so many penguins for such a long time.

## More males than females

The late Dr Lance Richdale elucidated much of our knowledge of the breeding and behaviour of the yellow-eyed penguin. About half the females may breed at two years of age, almost all by the age of three. A few males only will breed as two-year-olds and not until the males are five to six-year-old do they become established breeders. There is, according to Richdale, an imbalance of sexes with more males than females, hence the difference in the breeding age for the two sexes. Eggs, nearly always two, are almost equally sized and are laid any time from mid-September to early October. Incubation lasts for six weeks and this is shared equally by the sexes although not always.

Most eggs are hatched by the first two weeks of November and from hatching

one parent will always be in attendance at the nest for the first six weeks. This is called the guard stage. From mid-December onwards both adults daily return to the sea to catch sufficient food for the needs of two chicks. I have found that in years in which a plentiful supply of food is available, the guard stage may be extended by up to a month and in pairs that have a single chick the guard stage may continue until the chick fledges at the end of February.

In the rare occasions that one of the pair of adults dies after the beginning of the post-guard stage, a single parent is capable of fledging a chick. From the 90 gram chick hatched in November, most will leave for the sea weighing between 5 to 6 kilograms. Juvenile birds do not have the yellow crown completely around their head until they undergo their second moult in February of the following year. Juveniles appear to go north for their first three months, possibly spending all their time at sea. The few records we have from northern areas are nearly always of dead birds.

The most important requirement for nests is that they have a back to them and that neighbouring nesting birds are unable to see each other.

Birds moult in February to early April. They are generally very miserable and should be left alone.



## Ferrets the felons

In our first year of study, we located a total of 90 nests on the Otago Peninsula, and given the effort taken to locate them it seemed reasonable to follow them through. Once chicks started to hatch, a disconcerting pattern appeared in which penguins in some areas managed to fledge almost all the chicks that had been hatched, while those in other areas suffered a high loss of chicks. Not until the second year of our study were we to find sufficient evidence to identify the culprit. Ferrets were creating mayhem in some breeding colonies and in one all 14 chicks were lost. In another, 12 out of 13 were lost before we trapped the felon. Chicks appear to be taken by both ferrets and cats from a few days of age up to five to six weeks of age. Most breeding colonies on the Otago Peninsula appear to have resident ferrets and feral cats, and the conservative estimate for chicks lost in this area to predation is 22%.

Our final conclusion on the welfare of this penguin on the Peninsula is that it appears to be more than holding its own and that while numbers are down in some areas they have increased in others. Population numbers appear to be limited by the availability of suitable habitat rather than other factors, although clearly predation of chicks, if it were to get out of hand, could be serious. How serious could only be determined by firstly testing the level of predation in areas to the north and south of Otago, and secondly by making a population estimate for the species throughout its range.

The yellow-eyed penguin has an unusual distribution. The northernmost significant breeding area is the Otago Peninsula, although there are a few minor breeding areas to the north of the