



Captured on film for the first time: a male cassowary squats protectively over his newborn chicks while he awaits the hatching of the last eggs in the clutch.

Mr Frank Crome of CSIRO's Tropical Forest Research Centre in Atherton, Qld, calls what happened in August last year 'one of those events that make me remember why I entered science in the first place'.

There's an ABC film crew that would probably use much less enthusiastic language to describe how it felt about missing a once-in-a-lifetime opportunity by mere minutes: the chance to capture on film, for the first time, the hatching of cassowary chicks in the wild.

Fortunately, Mr Crome and his research assistant, Mrs Joan Bentruppenbaumer, were able to record the hatching in still photographs. That they were able to witness it at all is a tribute to Mr Crome's 20 years of research into the largest and most

spectacular vertebrate in Australia's rainforests, and to Mrs Bentruppenbaumer's patient field work to gain the confidence of these shy but potentially dangerous birds.

She spent months habituating wild cassowaries in the Mission Beach area to her presence, gradually winning their acceptance until she was able to approach as close as a metre. Mrs Bentruppenbaumer was able to watch one pair's mating ritual and to follow the female to where she laid three eggs.

The male cassowary, like the male emu, guards the eggs and does not leave the nest during the 48-day incubation period, and it is during this period and over the following 9 months of rearing the chicks that the male bird is at his most aggressive.

Although the cassowary's homicidal reputation is exaggerated (there is only one confirmed record of a cassowary killing a human, in the Cairns district during the 1920s), an aggressive cassowary nevertheless deserves respect: an adult bird is a formidable animal up to 2 metres tall, with thick, powerful legs and a claw 10–13 cm long on each inner toe. (Curiously, a female cassowary, not a male, was responsible for an unprovoked attack on a man at Julatten, Qld, in October last year: the man sustained serious chest injuries and the bird responsible was later shot.)

Mr Crome's and Mrs Bentruppenbaumer's research into the population, behaviour, and status of the cassowary has added much to

our previously sketchy knowledge of the species, which is under growing pressure from farming and urban development in northern Queensland.

While cassowaries are relatively abundant at higher altitudes the species certainly seems to be fighting a losing battle in lowland areas, where agriculture and human populations are concentrated. An appeal to the public for information on present and past cassowary populations in 1988, as part of research carried out by Mr Crome and Mr Les Moore, who is with the the Tropical Forest Research Centre, in co-operation with the Queensland and Australian National Parks and Wildlife Services, revealed an alarming apparent decrease in numbers.

The primary cause appears to be clearing of land for cattle-grazing, which means total destruction of most of the best country for the species — coastal plains and the foothills of the Great Dividing Range. Predation by dogs on chicks and by feral pigs on eggs and chicks may be a significant factor in cassowary population decline, as is competition for food by pigs. Development for tourism, residences, and roads is, however, a far more serious problem, especially in lowland areas: Mrs Bentruppenbaumer recorded that motor vehicles killed 17 out of 26 adults and chicks known to have died in the Mission Beach area between February 1986 and August 1988.

One of the surprising results of Mr Crome's field work is that disturbances such as forestry (when it does not involve wholesale destruction of habitats) may not have the negative effect on cassowaries that has been suspected. The Mission Beach region, for example, has been repeatedly

struck by cyclones and also heavily logged, yet it is indisputably the best area for cassowaries in northern Queensland.

And it appears the decline of the cassowary may have serious implications for rainforest in the region. Cassowaries are major

consumers of fleshy rainforest fruits (see 'Better red than dead' on the back page of this issue), many of which pass through the birds' digestive systems unharmed. Without cassowaries to carry their seeds to safe germination sites, some rainforest trees could disappear forever.

Witnessing the hatching of three fluffy, striped cassowary chicks was a thrilling experience; but the very rarity of such an event highlights how much we still have to learn about a species whose survival is becoming more fragile every day.

Carson Creagh