

## Donation to save the Southern cassowary (*Casuarius casuarius johnsonii*) after Tropical Cyclone Larry

On 20 March 2006 Tropical Cyclone "Larry" crossed the North Queensland coast at Flying Fish Point near Innisfail with winds reported to being about 290 kilometres an hour. The effects were devastating on most of the forests in the Wet Tropics World Heritage Area between Babinda and Tully and west to the Atherton and Evelyn Tablelands.

Cassowaries in normal circumstances are seen stoically meandering though the urban, rural and wilds of the Wet Tropical Coast. With stout and powerful legs, three toes on each and long sharp claws, they have little problem negotiating the rain forest under normal conditions. The adults stand between 1.5 to 2 metres tall and are Australia's second largest bird. They are black with a distinct horn helmet, like some evolved prehistoric dinosaur. Pale blue head, dark blue neck with vivid red and purple wattles (long fleshy throat protrusions). Besides being a keystone species in the Wet Tropics rainforests, cassowaries are of great cultural significance to many Indigenous Rainforest people, and are an icon of tourism in Far North Queensland.

Being a keystone species means that they play an integral part in the maintenance of the forest ecosystem. Their most significant contribution to the ecology of the forest is as a disperser of rainforest fruits. Cassowaries eat up to 150 different fruit species; it is estimated that 70 to 100 plant species depend almost entirely on the cassowary for seed dispersal. Cassowaries are the only native animals large enough to eat many of the larger fleshy rainforest fruits with large seeds. The cassowary's digestive system is gentle on the seed allowing it to travel through the gut unharmed. The seed remains in the cassowary's gut for about ten hours, ensuring they are deposited some distance away from the parent tree. When they are excreted the seeds are embedded in the dung, their own mini compost pile, and this fertiliser helps keep the seed moist and feeds the germinating seedling. This is why if you walk in the forest you will often see seedlings grouped together along the paths.

Like most animals, cassowaries face a range of natural threats such as the predation of chicks and eggs by native predators, death from disease, loss of habitat and food due to cyclones and poor rainfall. However, these threats are minor when compared to those caused by human activities. These include loss and fragmentation of habitat, predation by introduced animals, and death and injury from motor vehicles.

Whether it is land clearing for farming, urban development or logging, habitat loss and destruction is the major threat to the survival and well being of cassowaries. Land clearing impacts on cassowaries in several ways, most birds that lose their habitat due to clearing are usually unsuccessful in establishing themselves elsewhere.

The birds are very territorial and will defend their territory aggressively, for example, clearing may destroy part of the territory of two neighbouring birds and both birds are then placed under stress from lack of food and also access to fresh water, (cassowaries drink up to 20 times a day), it is when birds are under stress that they succumb to avian diseases.

Clearing usually results in the creation of isolated and fragmented pockets of habitat and broken homes for the cassowary. As a result of fragmentation the cassowary is forced to cross hostile environments such as open fields and roads, exposing them to impacts from vehicles and dogs.

A great many roads have been put through cassowary habitat and many birds live with several roads passing through their territory. Displaced birds may have to cross numerous roads before finding a suitable home range. Each time a cassowary crosses a road it runs the risk of being hit by a motor vehicle.

By 1997, 80.7 percent of all natural vegetation in the wet tropical lowlands, core cassowary habitat, had been cleared, up to 85 percent of cassowary habitat between the Russell and Murray River lowlands has been cleared.

Food shortages occur in most years, there is a general pattern of peaks and troughs with weather acting as the main environmental trigger for flowering and fruiting. However, events such as cyclones can disrupt this pattern. It is sad that our 'progress', over the last hundred years, has probably caused more changes to the cassowary and its habitat than over the last five thousand.

Post "Larry lots of the trees now have leaves and some palms and figs are fruiting, but it is difficult to know just how long before the forests can support the cassowaries again. There are many other fruit eating birds such as wompoo and topknot pigeons, currawongs, yellow orioles, catbirds and numerous honeyeaters all desperate for food.

Cyclones are a natural phenomena, but people have taken over so much of the cassowary's natural range and cleared so much rainforest that the impact of cyclones are greater ever.

QPWS have established about 40 cassowary feeding stations through the cyclone affected areas of the Wet Tropics, but what is needed is the protection and rehabilitation of cleared areas to create more cassowary habitat and adequate wildlife corridors.

Our Society was extremely concerned to learn of the plight of the endangered population of cassowaries around the Innisfail area. QPWS appealed to residents and tourists in the area affected by Larry to stop feeding cassowaries close to homes. The normally shy and reclusive cassowaries had been forced out of the surrounding rainforest with food sources drained by the cyclone's effect. Trees were not fruiting so there was no native food for the cassowaries.

Our Society was informed by a local wildlife rescue organisation called C4 that QPWS stated they don't want to set up feeding stations in the forests to sustain an artificial population. Many trees came down during the cyclone and there was a lot of debris, both these were covering the established tracks that the cassowaries use and close to the urban areas they have been using road edges to get about. This led to a number of birds being killed in road accidents.

Our Society was also informed that QPWS was giving a minimal amount of food via feeding stations because they didn't want to create a false population in or around populated areas, this despite not knowing just how many birds have starved to death in the inaccessible areas of the forests.

There have been reports of abandoned chicks - one was examined by a local vet who reported that the chick was older than it looked as it was stunted through lack of food. It has also been reported that the adult birds have no fat on them and they are all thin.

Our Society urged QPWS to establish feeding stations in the forest and also the cassowaries be fed larger amounts of food at least three times a week.

Our Society allocated funds to C4 to contribute towards the establishment and stocking of feeding stations and these funds have been passed on to National Parks to assist in the feeding of the cassowaries.

### **What is C4?**

In 1994 two key environmental groups, The Movement for Responsible Coastal Development and the Consultative Committee for Cassowary Conservation amalgamated to become the incorporated body 'The Community for Coastal and Cassowary Conservation Inc.' (C4). C4 is a not for profit organisation run entirely by volunteers with a current membership of 212 people.

C4 aims to support World Heritage Values; implement the Cassowary Conservation Plan; retain Environmentally Significant areas; influence planning and development impacting on social, economic and environmental issues and to provide public education and information on environmental issues.

### **What is a cassowary?**

The Southern cassowary (*Casuarius casuarius*), the most famous bird in the Wet Tropics has become a rare sight since it was listed as endangered Federally in April 1999. It is the largest and most spectacular flightless bird in the Australian rainforest, which flourished in Gondwanaland around 100 million years ago. Cassowaries are amongst the most ancient birds on earth. They belong to the Ratite family like the emu, ostrich, rhea and kiwi. They are fruit-eating (frugivore) animals that disperse over a hundred species of rainforest trees and vines. Therefore, this "rainforest gardener" plays an important role in rainforest regeneration and diversity.

There are three cassowary species in the world: the Southern cassowary in Australia, New Guinea and Ceram; the single wattled cassowary (*cassowary unappendiculatus*) in Northern New Guinea; and the dwarf cassowary (*Casuarius bennetti*) in Montane New Guinea. The name cassowary is of Papuan origin. It comes from 'kasu' meaning horned and 'weri' meaning head, in reference to the casqued or helmeted head

The cassowary is a threatened species. No one knows how many birds are exactly left in the World Heritage Tropical Rainforest of Northern Australia. The cassowary is not only a local icon, it is extremely important for the regeneration of the rainforest.

There are a lot of reasons for thinking that cassowaries may be in a lot of trouble, they are big birds, there are never many of them in one place, they need rainforest and there is not a lot of rainforest left in Australia.



*The Southern cassowary (Casuarius casuarius),*