also occurring in mangroves, *P. coronulatus* was encountered singly or in small flocks but *P. iozonus* was always in groups of three to ten. The two species frequently fed together in tall fruiting trees in several parts of the island and a mixed roost of over forty birds was discovered. The only congeners on the island, *P. superbus* and *P. magnificus*, were rare and were never seen in association with *P. coronulatus* or *P. iozonus*.

Social feeding of the two species on Kairiru resulted from the expansion of the niche of *P. coronulatus* into the canopy layers. Mixed roosts and feeding groups may be of advantage as an aid to finding dispersed sources of food (see Ward and Zahavi 1973, Ibis 115: 517-534), because birds of both species could follow one another to fruiting trees, thus reducing the effort of searching. Their similarity in plumage patterns (see Goodwin 1970) might encourage birds to follow members of the other species as well as conspecifics. Competition between the species may have been avoided, because *P. coronulatus* is sufficiently smaller than *P. iozonus* (75 g and 110 g; weights from Diamond 1972) for segregation according to the hypothesis that only small species can feed on fruit borne on very thin twigs (see Diamond 1975, *in* Ecology and Evolution of Communities, M. L. Cody and J. M. Diamond (Eds), Harvard). However, my observations, and those of Crome (1975, Aust. Wildl. Res. 2: 155-185) provided no evidence of separation within trees.

These observations were made during a few weeks at one time of year and the ecological relations of the two species may change seasonally with the fruiting of different species of trees. More detailed studies on the feeding ecology of *Ptilinopus* fruit-pigeons (Crome 1975; Frith, Crome and Wolfe 1976, Emu 76: 49-58) have shown considerable overlap in diet, although segregation is largely through differences in diet. It might be valuable to search for further examples of interspecific interactions that promote feeding on a common resource.

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OBSERVATIONS OF THE EASTERN GRASS OWL NEAR DARWIN, NT

There are only two recent published records of the Eastern Grass Owl *Tyto longimembris* for the Northern Territory (Crawford 1972, Emu 72: 142; Brooker 1976, Emu 1976: 154); both are of single sightings. Our sightings were of several birds for a number of hours flying in the early morning and evening, over approximately two square kilometres of black-soil plain at Holmes Jungle about twelve kilometres from Darwin; here the flood-plain was covered mainly with dry grasses and fine sedges, less than one metre in height.

On 5 August 1977 at 09:00 a single bird flew overhead and, on searching the plain with binoculars, we located another five flying. They were dispersed widely and flew constantly over the plain, hunting from a height of about four metres. The flight was lazy and flapping with occasional glides for short distances. The head was constantly moved from side to side, seeking prey. When prey was seen the bird twisted quickly, plummetting headfirst into the dense grass, with wings held back, stretched towards the tail.

Hunting birds patrolled the whole area plummetting sporadically into the grass, to remain there for a minute or so and then fly off again. Although it was difficult to count them, there were usually about five birds in the air at any one time and once at least eleven. They showed little fear of us, at times often flying almost over our heads. In flight, the long legs were held rigid at a downward angle well clear of the tail and protruded about six centimetres beyond the tail, with talons closed.

We visited the area again that evening. At 18:25 the birds began to fly and were still flying when we left at 19:15 (sunset). Next morning we arrived at the area before sunrise (07:00) to see the birds hunting. At 09:00 they began to settle singly in the grass and by 09:15 none was flying.

On inspecting many of the dense taller patches of grass we found much evidence that the birds were resting within. Pathways, droppings and down were found. Pellets were numerous and were collected for analysis. Occasionally birds were flushed from some of the clumps. Three birds, which had recently died, were found out in the open and collected. They were partially eaten. The colour of the birds varied considerably, most appearing darker than the literature usually suggests. The barring of the tail

and wings was very prominent.

We were unable to gather much information on the prey taken; however there were large grasshoppers scattered all over the plain. On 6 August a bird was seen at close range, clutching a rat by the neck in its talons. On 7 August one bird was observed to dive headfirst into grass and catch a rat. This bird was flushed immediately and flew off with the animal in its beak. After a short flight it transferred the animal to its talons while flying. It was also noticed that birds occasionally alighted on fallen sedge and grass near the roosting areas, where they rested in full sunlight for up to ten minutes. When resting they were forever on the alert. Only one bird was heard to call, a soft high-pitched chirrupping trill, repeated several times, as it flew overhead.

In mid-March 1975 AH observed a Grass Owl on several occasions at the 11-mile (17 km) peg south of Darwin on the Stuart Highway. In October 1976 JAE observed one bird hunting on the plains at the crossing of the South Alligator River on the Arnhem Highway. This bird was active at 10:30. On 8 July 1977 some kilometres north of that locality JAE observed one bird standing on the ground in full sunlight at the edge of the black-soil plains and on 24 October 1976, H. A. F. Thompson and P. Rowen observed one Grass Owl at Leanyer Swamp near Darwin. On 19 May 1973 H. A. F. Thompson saw a single bird near Coastal Plains Research Station at Humpty Doo.

We think that the Grass Owl in the top end of the Northern Territory is inclined to have an irruptive migration with fluctuations in population throughout the year, rather similar to the nomadism of Black Falcons *Falco subniger* and Letter-winged Kites *Elanus scriptus* (Thompson in press).

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ALBATROSS KILLED BY GIANT-PETREL

A white-phased Southern Giant Petrel *Macronectes giganteus* was seen to kill and partly eat an immature Black-browed Albatross *Diomedea melanophrys* about 200 metres offshore from Newland Head, SA (35°40′ S, 138°32′ E) at 08:00 on 28 July 1977. The sky was overcast, light to moderate south-west wind and the crests of the heavy swell were just breaking. However, on the five previous days strong to gale-force onshore winds occurred. Many seabirds were seen close to shore.

The Albatross, one of several Black-browed on the water and intermittently flying near the shore, was first seen flying and then to land about 150 metres from its congeners. About half an hour later the Giant-Petrel was noticed flying fast, with rapid wingbeats and low above the water from the north-east towards the then apparently sleeping Albatross. The presence of one dark primary in its right wing suggested it was the same bird seen here two days previously by Dr D. H. Close and myself. It approached from behind and when near the Albatross rose slightly as though to fly over it but then suddenly dropped on to the Albatross's back and with one quick movement seized the back of its head with its bill. The Albatross struggled violently and the Petrel was dislodged into the water but maintained its grip on the head. In the course of the struggle the Petrel was seen repeatedly to push the Albatross's head under water. Still gripping the head, it then clambered back on to the Albatross's back from the front and over one shoulder, and forced the head, neck and shoulders under the surface. The Albatross continued struggling for several minutes before being drowned but the Petrel remained on top long after movements ceased, mantling it with downturned outspread wings in the posture commonly adopted by raptors over a fresh kill. Eventually it moved off and swam alongside the floating carcass, began pecking at the body and then plucked the lower abdominal feathers. These were pulled out in large tufts and were soon scattered over the water. Shortly after viscera were pulled out and swallowed. All the time it was plucking and eating, the Petrel held it wings outspread. It also frequently pushed its feet against the body when pulling and tearing parts from it. The current gradually drifted the birds to the east and, after about forty-five minutes, out of sight past the headland. Twice while the Petrel was feeding single Black-browed Albatrosses flew towards it but veered away on reaching the scene. A Cape Petrel *Daption capense* once landed briefly near the Giant-Petrel.

Giant-Petrels are notoriously voracious. Johnstone (in press, Proc. 3rd Symp. Antarct. Biol.) said that they feed by scavenging and predation and gave examples of predation on smaller petrels. In boluses of undigested food regurgitated by the Northern Giant-Petrel *M. halli* on Macquarie Island he found large white plumes which most probably came from albatrosses but presumed that most Procellariiformes in the diet of giant-petrels are handicapped adults taken in flight or as carrion. I know of no previous