

REDISCOVERY OF A RESIDENT POPULATION OF EURASIAN COOT *FULICA ATRA* IN PAPUA NEW GUINEA

BRIAN W. FINCH¹ AND DAVID GILLIESON²

In the 1960's Harry Bell located a resident population of Eurasian Coot *Fulica atra* on Lake Wangbin not very far from what is now the town of Tabubil (Bell 1969). Very shortly afterwards these birds completely disappeared, and he stated that shotguns were responsible. At the time this was the only known resident population of coots in Papua New Guinea.

Other records of non-resident birds in the Port Moresby area at Moitaka Settling ponds and Tanubada Ponds are listed in observations in the PNGBS Newsletter in 1966 and 1967, and also for Hisiu, Kanosia, and Aroa Lagoons (Central Province) in 1978-79.

On 10 June 1985 we were in a helicopter at Ubai Gubi flying over a ridge not far from the lodge (perhaps 3 km in a straight line). In the bottom of a valley was a lake completely bordered by vegetation and well concealed. We went down lower to see what was on this lake, and approached until we were hovering some 40 m from the surface of the water. Through 10 x 40 binoculars it was easy to see that there were at least 30 Coot present, including one on a nest. Two Little Grebes *Tachybaptus ruficollis* were present (also new sightings for this area), and there were three Pacific Black Ducks *Anas superciliosa*.

The lake, at about 2000 m, is not marked on any map, and appears to have no name. There are other lakes hidden in other valleys including some on Crater Mountain where birds matching the description of coots have been reported by the local people.

Bell, H. 1969. Field notes on the birds of the Ok Tedi Drainage. *Emu*. 69: 193-211.

Addresses: ¹ P.O. Box 59749, Nairobi, Kenya

² not known to us [Eds].

GREY IMPERIAL PIGEON NEAR KARAWARI LODGE, EAST SEPIK PROVINCE

HELEN C. FORTUNE HOPKINS

On 22 June 1987 I saw a single large pigeon flying over the Karawari River, close to Karawari Lodge, about 135 km from the coast and the mouths of the Sepik and Ramu rivers. The bird had a wing pattern similar to that of the Pied Imperial Pigeon *Ducula bicolor* with dark outer wing edges (primaries and secondaries) and pale wing linings. The wing linings and underparts were clearly grey, not white, and the feet were bright pink. Of the four grey and green *Duculas* described by Beehler *et al.* (1986), this description fits only the Grey Imperial Pigeon *Ducula pistrinaria*, and none of the four (Spice, Pacific, Grey, and Elegant Imperial Pigeons) are recorded from inland in the Sepik region. The Grey Imperial Pigeon is known to occur on islands off the coast of the Sepik-Ramu, and on the eastern Papuan Islands, in mangroves and coastal forest, often in flocks (Beehler *et al.* 1986).

Beehler, B.M., T.K. Pratt & D.A. Zimmerman. 1986. *Birds of New Guinea*. Princeton University Press.

Address: Biology Department, U.P.N.G., P.O. Box 320, University, P.N.G.

RECORDS OF BIRDS FEEDING AT FLOWERING OR FRUITING TREES IN PAPUA NEW GUINEA

HELEN C. FORTUNE HOPKINS AND MICHAEL J.G. HOPKINS

Many people watching birds will see them feeding in flowering or fruiting trees. Indeed, one of the best ways to see some species, such as parrots and fruit-doves, is to watch a suitable tree and let the birds come to you. A number of workers have made detailed studies of feeding behaviour in New Guinea birds and a selection of the more important references is given in the bibliography. However, the feeding behaviour of many species is completely unreported, and the amateur bird-watcher can make a valuable contribution by recording food plants.

Of course, detailed studies of particular species will be of much greater value than isolated records. However, if bird-watchers can be encouraged to record and report their feeding observations, a body of information will be built up, and patterns should emerge. Not only is this information of interest to ornithologists studying the feeding habits of birds, but it is also of interest to botanists and ecologists studying the pollination or dispersal ecology of particular plants.

For the bird-watcher the difficult part is not in identifying the bird, but in collecting and identifying the plant. While there are about 700 species of bird on the mainland of New Guinea (Beehler *et al.* 1986), it has been estimated that there are about 9000 species of plant in the same area (Good 1960). Vague descriptions of the plant, or small samples of the flowers, fruit, or leaves picked up off the ground are usually inadequate to identify the plant accurately. Good botanical specimens are required. Making such collections is not difficult, but the technique may be unfamiliar to many bird-watchers. To assist bird-watchers in making collections we give some notes here which we hope will encourage them to collect identifiable botanical specimens and to submit feeding records for publication in *Muruk*. A much fuller account may be found in Womersley (1976).

1) Field notes. These are best taken while you have the fresh specimen in your hand. Colours especially are usually lost in the dried specimen. The following notes should be recorded:

a) Locality of collection; province; altitude; date of collection. Latitude and longitude are also useful, especially if the locality is difficult to locate on a map.

b) Collector's name(s) and collection number. It is very important that the specimen you collect can be uniquely identified. "*H.C.F. Hopkins & M.J.G. Hopkins #224*" can refer to only one individual collection. Anyone finding mention of this in the literature can (at least in theory) go to the plant collection (herbarium) where it is stored and verify the identification for themselves. Start a number series in your name, and number your collections sequentially. Be careful never to use the same number for two different collections.

c) Description of the plant. This should include its habit (tree, shrub, liana, epiphyte, herb etc); the height of the plant, and for a tree, its trunk diameter; its frequency in the habitat (dominant, abundant, common, rare etc); colour of the flowers and/or fruits; description of any odour; anything else distinctive about the plant (presence of buttresses, colour of bark etc).

d) The vegetation type in which it was found (e.g. forest, secondary growth, garden, savanna, mangrove etc).

2. Making the specimen. The eventual aim is to produce a flat, dry sample of the plant, which can be glued or sewn onto cardboard and stored with other specimens in a herbarium.

a) Take a sample from the plant. Select a portion which includes fertile material, i.e. flowers or fruit, or both if they are present. The size should be sufficient to fit on a normal-sized newspaper.

Taking a sample from a shrub or herb usually presents no problems. All you need is a pair of secateurs or similar device. With trees however this can be difficult. Various methods have been developed for sampling from trees, including climbing with or without ropes, using shotguns, and using trained monkeys. Most of these are impracticable for the casual collector. Pole clippers, which lift a clipping device into the canopy using an extending pole can be used, but again are not often available. In practice it is often close to impossible for a bird-watcher restricted to the ground to collect a good specimen from a large tree. If you are unable to collect from the actual plant there are two possibilities. Firstly search the ground for freshly fallen branches, leaves or fruit. You may be able to find sufficient material for an identifiable collection. This should only be done when there is no other alternative. A good collection of freshly cut material is infinitely preferable. The other alternative is to look for another tree of the same species growing nearby, one which is easier to reach. This is of course dangerous because mistakes in field identification could lead to false records, so again only use this *in extremis*.

b) Preparing the specimen. Place the collected parts between a folded double sheet of newspaper. Try to arrange it so that it is more or less flat, with the leaves spread out, and the fertile parts visible. Write your name and collection number either on the outside of the sheet or on a tag attached to the plant. The specimen should then be placed in a plant press. A botanist's press consists of two latices of wooden strips the same size as the newspaper. If you do not have a press, two thick cardboard sheets could be used instead. With the specimen(s) inside the press is then squeezed with two straps (or pieces of string) to hold the specimen firmly in place.

c) Drying the specimen. This is best done in a special drying oven, where the whole press is put in the oven, with each specimen in its newspaper sandwiched between two sheets of cardboard with a corrugated metal separator between each of these. If you have a small number of collections however, this can be done by leaving the press in hot sun or above a light bulb in a drying cupboard. The aim is to get the specimen as dry as possible as soon as possible. Drying can be speeded up by replacing the inner piece of newspaper with a fresh dry one regularly (once or twice a day). When the specimen feels quite dry, and has become stiff and brittle the process is complete.

3) Preservation and identification. Your specimen should now be sent to a herbarium for mounting, identification, and storing. The two largest herbaria in the country are in Lae (P.O. Box 314, Lae, P.N.G.), and in Port Moresby (The Herbarium, Biology Department, UPNG, P.O. Box 320, University, P.N.G.). The specimen(s) can be taken or sent (securely packaged) to either of these with requests for identification. With each specimen you should include a label (approximately 15 x 10 cm) with all the information which you took as field notes neatly typed or written out. Herbarium staff will carry out the identification, mount the specimen, and add it permanently to their collection.

It is usual to collect more than one specimen each time you make a collection, so that there are several duplicates for each collection number. This is so that one duplicate can be sent to a specialist for identification if necessary, and so that one collection can be represented in several herbaria. For Papua New Guinea the suggested number of duplicates is about four.

To encourage the publication of feeding records we will be happy to attempt identifications of material sent to us at the University. However, identifications can be time consuming and there may be some delay in reporting identifications after receipt.

When writing up feeding records for publication you should include much of the information collected in the field notes, and refer to the specimen you collected by its name and number, and say where it is deposited. It then acts as a voucher for your observations. The name of the plant, its authority (the name of the taxonomist who described it), and the family to which it belongs should all be given. A detailed description of the flowers or fruits should also be given, paying special attention to how they are presented to the birds, for example are they single or in bunches, terminal on branches, or hidden amongst leaves etc, was there an indication of ripeness, and did the fruit all become ripe at once, or were there just a few ripe fruit in the tree? What was the fruit size and colour, did the fruit open to reveal an edible seed or aril within the fruit etc.? For flowers one might need to know if the flower was tube or bowl-shaped, was there nectar available, etc. Also important is the behaviour of the bird. Did it ingest the whole fruit, did it immediately swallow it, or did it fly away with a fruit in its beak? How long did it spend in the tree, how many fruit did it eat, how long did it take to eat each fruit etc.?

In this issue of Muruk there is a short collection of papers reporting feeding observations. It is to be hoped that this be a regular feature, and that Muruk will become an important source of information of the feeding ecology of New Guinea birds.

- Beehler, B.M., T.K. Pratt & D.A. Zimmerman. 1986. **Birds of New Guinea**. Princeton University Press.
- Good R. 1960. On the geographical relationships of the angiosperm flora of New Guinea. **Bulletin of the British Museum of Natural History (Botany) 2: 205-226.**
- Womersley, J.S. 1976. Plant collecting for Anthropologists, Geographers and Ecologists in Papua New Guinea. 2nd Edition. **Botany Bulletin no. 2**. Office of Forests, Lae, Papua New Guinea.

The following references may be useful for background reading about feeding records for New Guinea birds. The list is by no means comprehensive.

- Beehler, B.M. 1983a. Frugivory and polygamy in birds of paradise. **Auk** 100: 1-12.
- Beehler, B.M. 1983b. Notes on the behaviour and ecology of Macgregor's Bird of Paradise. **Emu** 83: 28-30.
- Clapp, G.E. 1987. Mixed flocks of birds feeding on fruits of the savanna tree *Antidesma gaisambulla* near Girua airfield, Papua New Guinea. **Muruk** 2: 58-60.
- Diamond, J.M. *et al.* 1977. Fruit consumption and seed dispersal by New Guinea birds. **Wildlife in New Guinea. Wildlife Publication 77/9**. Department of Natural Resources, Konedobu, P.N.G.
- Frith, H.J., F.H.J. Crome & T.O. Wolfe 1976. Food of fruit pigeons in New Guinea. **Emu** 76: 49-58.
- Kwapena, N. 1985. **The Ecology and Conservation of Six Species of Birds of Paradise in Papua New Guinea**. N. Kwapena, Port Moresby, P.N.G.
- Lamothe, L. 1979. Diet of some birds in *Araucaria* and *Pinus* forests in Papua New Guinea. **Emu** 79: 36-37.
- Pratt, T.K. 1983. Diet of the Dwarf Cassowary *Casuaris bennetti picticollis* at Wau, Papua New Guinea. **Emu** 82: 283-285.
- Pratt, T.K. 1984. Examples of tropical frugivores defending fruit-bearing plants. **Condor** 86: 123-129.
- Pratt, T.K. & E.W. Stiles 1985. The influence of fruit size and structure on composition of frugivore assemblages in New Guinea. **Biotropica** 17: 314-321

Address: Biology Department, UPNG, P.O. Box 320, University, P.N.G.