

# Breeding the Great-billed Parrot

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The Great-billed Parrot (*Tanygnathus megalorhynchos*) is, without a doubt, a visually striking, yet neglected avicultural species. Of the three *Tanygnathus* species that are aviculturally known (others being the Blue-naped and the Blue-backed Parrots), the Great-billed Parrot is the largest and most physically impressive. In appearance, the Great-billed Parrot is typical of *Tanygnathus*, being predominantly green in plumage except for the back and rump which are light blue, and the wings, of which the median coverts are black with delicate golden edges. The most striking visual feature is, however, the proportionately large and bright orange bill. Sexual dimorphism can be seen in the larger size of the male's bill, but with eight sub-species being recognized, the aviculturists seeking to distinguish the sex of this species by this method must ensure that the birds in question are of the same race.

The natural range of the Great-billed Parrot extends across several Indonesian Island groups including the Moluccas, Tanumbar, Lesser Sunda and Papuan Islands. While still recorded as being locally common in many areas of its natural range, as with many psittacine species from this region of the world, concern needs to be expressed about its future prospects and the establishment of a viable self-sustaining captive population must, of course, be considered advantageous.

In its behavior, the Great-billed Parrot is normally a nervous and secretive bird although particularly tame birds can be encountered as an exception to this rule. The pairs accommodated in the B.I.I. (Birds International Incorporated)

collection show little interest or behavior between each other for most of the year. In the case of the pair which has now bred at the Center, the first indication of breeding behavior was the disappearance of the hen from the main aviary into the nest box. The Great-billed Parrot has been known in aviculture since the start of the century, but only in relatively small numbers. The late 1980's did see an increase in their availability but this, to date, has not led to the species becoming established in captivity. There is little debate that it is considered to be an extremely difficult avian species to breed in captive condition. At the Research and Breeding Center that is operated by B.I.I. in the Philippines, a number of pairs have been captively established in the collection for a period of six years or longer with, until recently, no breeding activity being initiated by any of the pairs. This, in spite of the near perfect climatic conditions and exceptional husbandry facilities which have been provided by the center. Now, at last, success has been achieved with the successful breeding and rearing of the Great-billed Parrot having taken place.

The adult pairs of Great-billed Parrots maintained at the Research and Breeding Center are housed in a series of individual, free standing portable aviaries. These aviaries measure approximately 150 cm x 90 cm x 120 cm (5' x 3' x 4') in their internal dimensions. These aviaries are known as "portable" aviaries because the base of the aviary is situated above ground level, being comprised of wire sides, top and bottom, with the aviary being supported above the ground by

Photos by Birds International, Inc.



The Great-billed Parrot is aptly named from its large head and mandibles. Along with its short tail, this species often appears top-heavy.



Successful reproduction of the Great-billed Parrot is still uncommon in captivity. The Birds International, Inc. Research and Breeding Centre in the Philippines was successful as seen by this 17-day-old Great-billed Parrot chick.

four legs, one in each corner. The principal advantage of these aviaries is that they can eliminate the risk of contamination to the aviary inhabitant from the feces of wild birds or rodents. Perching is provided within the aviary by natural wooden tree branches. Other types of accommodation have been used at the center over the course of the last six years to house this species, such as more traditional flight aviaries, but because of the nervous nature of these birds and their high susceptibility to stress related problems, the portable aviaries have proved to be the most successful accommodation that has been tried. To further reduce the disturbances and potential stress of the birds, the aviaries are serviced completely from the outside and are rarely entered. Food and water dishes are provided via special hatches which are incorporated into the aviaries' design, periodic cleaning is undertaken with a pressure hose from the outside and the nest box can also be inspected from the outside with no need for the aviary to be physically entered on a regular basis.

The diet of Great-billed Parrots at the Research and Breeding Center consists of three feedings daily which are given at 7:00 a.m., 10:00 a.m. and 1:00 p.m. Pairs which are rearing young are also provided with additional feeding periods at 6:00 a.m. and 3:00 p.m. The content of the diet is made up principally from sprouted seeds (such as rice, grain, alfalfa, barley, wheat and safflower) and various fruits and vegetables (such as string beans, carrots, boiled corn, boiled garbanzos, boiled kidney beans, steamed sweet potato, coconut, chico, banana, papaya, leafy vegetables and steamed rice). A small amount of dry sunflower seed is also provided at the 3:00 p.m. feeding each day. Occasional foods which are only given a few times each week include small amounts of cheese, ground beef and hard-boiled egg.

The pair of birds which provided our breeding of this species in 1993 is situated in a secluded and rarely disturbed region of the breeding area, a factor of obvious importance when working with the Great-billed Parrot. The nest box used is of conventional design and measures approximately 90 cm x 45 cm x 45 cm in its external dimensions. The entrance hole has a

diameter of 14 cm. Nesting medium is supplied inside the box by a deep layer of wood shavings. Courtship behavior between pairs is rarely noted as these birds, nervous and seclusive by their nature, are given as much privacy as possible. In the case of the breeding pair, the first indications of breeding activity were the hen bird's increased interest in the nest box and subsequently their excavation inside to make a scrape in the wood shavings. When the female began to stay inside for prolonged periods of time, the nest box was inspected and one egg was seen.

The female laid two eggs, both white without markings. Incubation of the eggs was recorded as 28 days with the female commencing incubation from laying of the first egg. When inspecting the nest box soon after the hatching of the second chick, the similarities between these chicks and the many eclectus parrot chicks we also currently have at the center was very clear. The skin was pale pink and virtually devoid of natal down other than a few short wisps on the lower back region. One noticeable feature of these chicks was the loudness of their vocalization at this early age; their cries could easily be heard from outside the nest box before actual inspection.

On the 11th of March, when the chicks were 11 and nine days of age, they were both removed from the nest box and transferred to the nursery department for handrearing. At this time, it was noted that the skin was light pink in coloration and, upon close examination, a few strands of light yellow natal down were present, but only upon the lower back region. The bill was already starting to turn orange in color. The toenails were gray. The older chick had both eyes slitting with one eye half open.

On the 15th of March, with the chicks now aged 15 and 13 days, the older chick had both of its eyes open, the younger chick still had both eyes slitting. The bill of the older chick had now developed a deep reddish-orange coloration towards the tip of the upper mandible.

By the 30th of March, when the chicks were 30 and 28 days of age, pins had started to emerge extensively on the wings, with smaller pins also completely covering the head. Tail pins had also appeared and were now

1 cm in length. The whole of the bill had now turned into a deep reddish-orange in coloration. Secondary down had now appeared over much of the body.

On the 2nd of April, with the chicks aged 33 and 31 days of age, the pin feathers on the wing had started to break their quilling to reveal green plumage. Tail pin feathers had not started to break through their quilling yet but were now over 2 cm in length. Toenails were still gray. Some of the pin feathers on the thighs were just starting to break their quilling. Pin feathers on the head had gained green coloration, although they had not started to break their quilling yet.

By the 5th of April, with the chicks aged 36 and 34 days, the wing feathers were mostly free of quilling. Tail feathers were now breaking through their quilling, with also a few scattered pin feathers on the breast now breaking through, as well. A few days later, on the 9th of April, the wings were extensively feathered and feathering was breaking through on the head, breast, abdomen and thighs.

On the 15th of April, with the chicks being 46 and 44 days old, the wings were fully feathered with the distinctive golden edge markings being clearly defined upon the black medium coverts. The head was nearly fully feathered with just a few pins on the crown still to break their quilling. The tail feathers were now free of any quilling but had not yet reached their full length. Breast, abdomen and thighs were all becoming extensively feathered. Four days later, on the 19th of April, the chicks were well-feathered all over their bodies except for the flank regions which had yet to become extensively feathered.

By the 1st of May, with the chicks aged 62 and 60 days, the oldest chick had just achieved full feathering with the younger chick to achieve this within a day or two. Both chicks were feeding upon soft fruits and soaked seeds that were being provided for them and weaning had begun and was proceeding well. Some of the chicks' weights recorded from their early period in the nursery are illustrated in the accompanying table of daily weight gain.

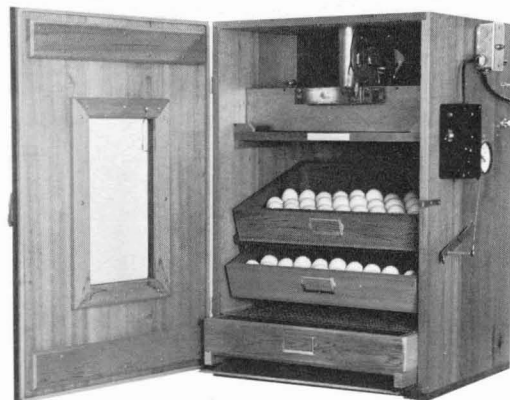
The current captive status of the Great-billed Parrot should be the cause of some concern. Birds have been available to aviculture, particu-

**Weight Gain of  
Great-billed Parrots  
(*Tanygnathus megalorhynchos*)**

Age in Days	Weight of Chick 1	Weight of Chick 2
9	—	—
10	—	—
11	—	—
12	—	—
13	—	91 grams
14	—	91 grams
15	104 grams	108 grams
16	130 grams	123 grams
17	147 grams	142 grams
18	168 grams	156 grams
19	189 grams	175 grams
20	205 grams	196 grams
21	226 grams	215 grams
22	247 grams	227 grams
23	271 grams	252 grams
24	277 grams	274 grams
25	303 grams	296 grams
26	323 grams	306 grams
27	340 grams	350 grams
28	346 grams	359 grams
29	372 grams	367 grams
30	384 grams	391 grams
31	394 grams	402 grams
32	406 grams	428 grams

larly over the course of the last ten years, but despite this, the Great-billed Parrot cannot be described as being established in a captive population to any degree of significance. This is undoubtedly a species which is challenging to maintain and breed and it will require long-term commitment from those aviculturists keeping it before success may eventually follow. Although this bird can be considered among the more difficult species of avicultural psittacines, it does, however, have many qualities in its favor to encourage increased avicultural attention. The physical appearance of the bird is striking with its proportionately large head and bill. The voice can be loud, but Great-billed Parrots rarely create much noise, making them suitable for aviculturists who are constrained in their choice of species by the presence of neighbors in close proximity. Added to this, the Great-billed Parrot can definitely be regarded as a species desperately in need of the attention of experienced aviculturists to safeguard its future status, in the short-term as a captive population, but also looking ahead to ensure the ultimate survival of this bird in its wild population, too. ●

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