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Crowned Digeons

by K.C. Lint Curator of Birds Emeritus Zoological Society of San Diego

Giants of the pigeon family are those members of a small but distinctive group of crowned pigeons found in more remote forests of New Guinea and neighboring islands. Three species and three sub-species have been well described. The largest form measures 33 in. (70 cm.) in length and weighs 8 to 10 pounds — the size of a small turkey hen. All are greyblue and maroon in color with contrasting patches of white or gray on the wings or tip of the tail.

The Crowned Pigeons, genus Goura, as a group differ from all other pigeons. They have reticulated scales on their legs, sixteen tail feathers, no oil gland and no gall bladder. The most striking feature is the erect, laterally compressed fan-shaped crest, the feathers of which have long and separated barbs which give them an attractive lace-like appearance. Unfortunately, these same filmy plumes once were prized in the millinery trade, under the name of "goura" feathers from the generic name of the group.

Their behavior pattern is similar to other forms adapted to ground and forest dwelling, and like the green fruit pigeons of the genus *Treron*, they also show the up and down movement of the tail when excited or disturbed.

The male's voice is a deep booming coo in the breeding season, similar to the drumming of an Emu to attract females in a given territory. I have observed the bowing display many times with the tail spread and erected, partly opened wings and stamping of feet in front of desirable females. In the pre-copulatory display, the female responds by crouching, running beneath the male and holding her bill close to his and making short hissing calls. When she is submissive, the male mounts and copulation is completed.

The purpose of this article is to share my experiences in the successful raising of Crowned Pigeons in captivity. Far too many individuals and aviculturists keep birds rather than raise them. Hundreds of Crowned Pigeons have been imported into the United States and Eurasia in the last ten years. How many pairs raised one or two chicks consistently? Very few aviculturists have taken the time to study the breeding behavior and life history of this interesting group of pigeons.

Although Crowned Pigeons are members of the pigeon family Columbidae, which has 285 species, they are a specialized group and can not be treated in the same manner as the common members of foreign pigeons and doves usually seen in public or private aviaries. They need special security, special aviaries, special nests, and special feeding for adults and chicks if propagation is to be successful.

ARTIFICIAL INCUBATION. Artificial incubation of eggs is not recommended for Crowned Pigeons. After thirty-six years of experience in rearing these birds, I find that the parents will do a much better job in incubating, brooding and feeding the nestling, if only given the opportunity.

SECURITY: Cover, Landscaping.

Most pigeons and doves are timid birds and are easily frightened by cats, owls, hawks or rats. Untame birds rocket upward, in the manner of partridges, when they are startled, and should be given as much security as possible. To provide this security I would suggest that the entire top of the aviary be covered with corrugated fiberglass panels, plywood panels or palm fronds. In New Guinea and in their natural environment, Crowned Pigeons live in rich rain forest habitats with very little sunshine penetrating their natural homes.

Good-sized trees, eucalyptus, acacia, orange, lemon, guava or fig trees may be planted in aviaries and pruned three feet from the top to provide roosting facilities

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aristocrats of the pigeon family



Blue Crowned Pigeon. Goura cristata cristata. With chick 14 days old. Northwestern New Guinea (West Irian). Eucalyptus and wire woven artificial nest, six feet in height.

for these large birds. Saplings require too many years to attain the size which would provide adequate roosting and nesting sites.

Turf or grass on dirt floors may be seeded annually as ground cover. Too many aviculturists keep Crowned Pigeons in small sterile pens with little landscaping and still expect the birds to propagate. This is unfortunate, because propagation will not occur under these conditions.

AVIARIES. Our first Crowned Pigeons reared chicks successfully in pens 15' x 15' x 10' in height. Nineteen chicks were raised of three species, *Goura victoria* victoria, Goura cristata cristata and Goura scheepmakeri sclaterii in pens of this size.

With the present high cost of lumber, wire and labor, it is better to plan very carefully for a group of pens and construct them so that they are comfortable for the birds and provide an easy way for their general care. All effort is wasted if the construction is not as predator-proof as possible. How many valuable birds are killed annually by rats during the night?

I recommend using ½" x 1" welded wire fabric, gauge 16 as outside wire on pens for Crowned Pigeons. This will bar

sparrows or other unwelcome guests from your pens. With food prices sky-rocketing, aviculturists must prevent the waste of food by free-loaders. my second choice for a wire covering for pens is a hexagonal wire netting, ½" mesh, 22 gauge, galvanized. Both types of wire are used extensively in aviary construction.

Many of you are familiar with the Tropical Rainforest in the San Diego Zoo. This giant aviary is built on a hill-side, measuring 190 feet long, 80 feet wide and 90 feet at its maximum height. A walk-through aviary, visitors follow a winding path lined with palms, fig and acacia trees, philodendrons, bamboo and ferns. Crowned Pigeons have nested repeatedly in this aviary, their favorite spot being a Black Acacia tree, 30 feet in height. Thirteen Scheepmaker's have been raised in this particular aviary. ½" x 1" welded plastic-covered wire encloses this entire cage.

NESTS: As with other pigeons and doves, Crowned Pigeons build very flimsy nests, consisting of sticks and leaves in trees and shrubs suitable for nesting sites. In our original 15' x 15' x 10' breeding pens, artificial nests were constructed. Eucalyptus branches were tied together with wire and placed in poultry netting

basket to make a durable nest which the egg or chick would not fall through. These heavy pigeons need a strong nest which must be supportive when both of the birds are carrying nesting material to the nesting site.

Our artificial nests measure 24 inches across and 8 inches in depth. This size nest may be nailed to 4" x 4" posts in the center of the pen, 6 feet in height. Crowned Pigeons prefer open nests and do not like to use nests against a wall as so many other pigeon and doves prefer.

Long natural poles may be placed at the edge of the nest for the birds to roost on and to approach the nesting site. These should be fastened securely to prevent turning and frightening the birds. Both sexes participate in carrying sticks, stems, and leaves to the nest. In the breeding season, baskets of sticks and twigs are placed in the aviary daily for them to work with. When the hen becomes broody, she will sit on the nest and shape it as the male continues to bring nesting material to complete the nest.

NESTING: Birds reach the breeding age when three or four years old. The normal clutch is one egg (white in color) and as soon as this egg is laid, incubation begins. The incubation period is 28-29

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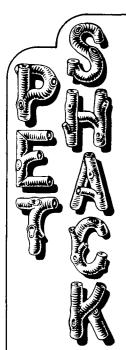
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Blue Crowned Pigeon. Goura cristata cristata. With chick 28 days old, Northwestern New Guinea (West Irian). Aggressive display of male and chick when approached in nest.



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days for the four species we have raised. When hatched, the chick is dark in color, eyes closed, and completely helpless. Both sexes incubate the single egg and share the feeding of the nestling as it is being reared. Feeding by both parents is done by regurgitation and the food is predigested by the parent birds before it is pumped into the nestling.

The chick grows rapidly and remains in the nest four to five weeks before fledging. At this age it leaves the nest and the parents continue to feet it whereever it may be on the ground or on low branches provided for it in the aviary. Usually at this stage of development the chick cannot fly well. Do not attempt to return the chick to the nest as it will only fall out again and perhaps break a leg or receive internal injuries in its fall. As the chick becomes stronger and continues to grow, the parent birds take excellent care of it, feeding, brooding and teaching the chick survival in its manmade environment. At the age of six weeks, the chick usually follows the parent birds around the aviary to the feeders and water containers, where the mother teaches the chick to taste the food and to draink water independently. Both parents continue to care for the chick until it reaches the age of 10 to 12 weeks. At this age, it is almost as large as the parents. The parent birds may decide suddenly to wean the chick, as they may be interested in re-nesting and adding to their family. If any aggressive behavior is noticed toward the chick, it should be removed and placed in a separate pen. If several pairs have produced chicks, the chicks may be placed together in a nursery pen for safety.

FEEDING: Proper feeding is the keynote to success in breeding Crowned Pigeons in captivity. One's main interest should be in maintaining the birds for a long lifespan and sustained breeding. All Crowned Pigeons require a balanced diet – proteins (amino-acids), carbohydrates, fats, minerals, vitamins and water. In addition to being required for most bodily functions, fresh clean water also serves as a lubricant, softens the food in the crop and helps in the process of digestion.

Crowned Pigeons should be fed a softbill diet — diced fruits, currants or raisins (soaked overnight in water), bread and milk, boiled rice, hard-boiled eggs (complete), turkey breeder pellets (moistened), sprouted green food, peanuts or peanut butter. Mealworms should be provided also, as these birds are omnivorous in their natural state. Fruits and Berries: A variety of fruits should be offered. Soft fruits, such as bananas, grapes, figs, pears are usually favored, but apple, soaked currants, raisins and boiled ground carrots may also be given. Cherries, blackberries, raspberries, blueberries and other edible fruits and berries may be offered in season.

It is important that the fruit is not over or under ripe, and fattening food as banana, should be fed in limited quantities except in the breeding season or in winter if the birds are kept outside.

A simple way to provide needed fruits for Crowned Pigeons is to use 6 oz. cans of fruit cocktail, feeding 1/2 can daily for two birds. With the other parts of a balanced diet this amount is sufficient.

In my trip to New Guinea this past year to the Western Highlands and Mt. Hagen area, Crowned Pigeons and Cassowaries were observed feeding on the ground on the buds of Eugenia trees and wild figs. This provided abundant food for both species. Small red berries, the fruit of a ground-cover plant was also abundant. The orange jelly-like capsule splits to show the seeds inside. This is a plant of the shrub layer, growing to one meter in height beneath the conifer canopy.

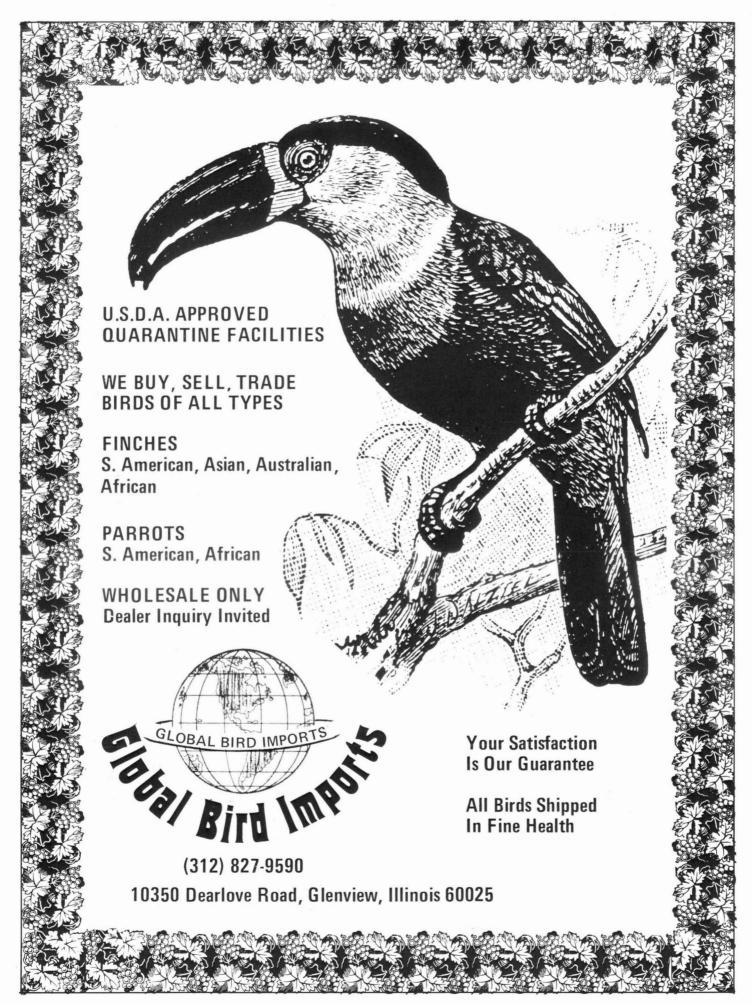
Bread and Milk sprinkled with vionate (vitamin-mineral powder) is a good basic food in their daily diet. Sometimes it is necessary to hand-feed or raise chicks that have fallen out of a nest. We have raised several on a mixture of bread and milk, diced banana and peanut-butter thoroughly mixed.

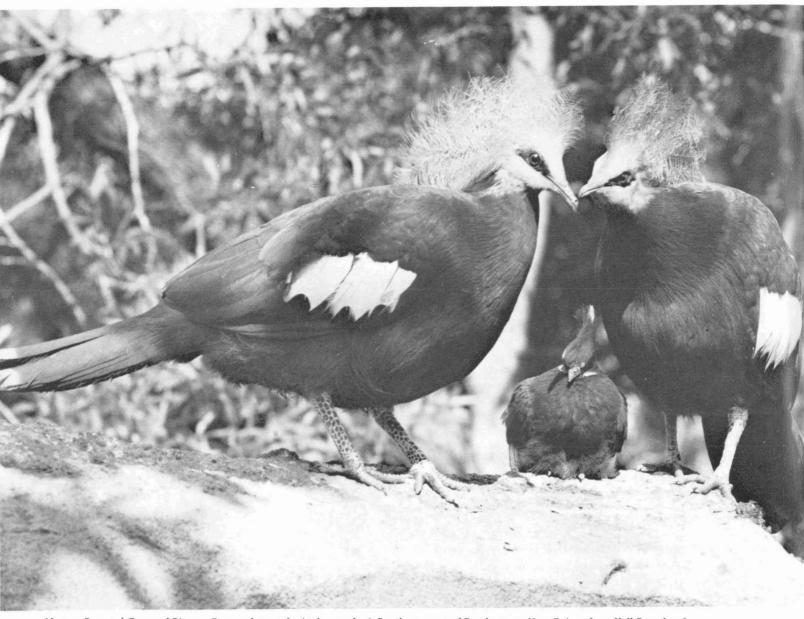
Boiled Rice, white or brown, with a hard-boiled egg (shell and all) mixed in it, provides protein and calcium and is fed two days each week.

In the breeding season, mealworms, 3 or 4 per bird, are fed twice daily. Some insectivore food is necessary for these birds and we believe that mealworms stimulate egg laying and promote fertility. Yellow mealworms, the larval form of the grain beetle (*Tenebrio molitor*), by chemical and microbiological assays, contain Vitamins A, C, E, Thiamine, Riboflavin, niacin, folic acid, B6, B12, and ash as minerals.

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continued on page 10





Maroon-Breasted Crowned Pigeon. Goura scheepmakari scheepmakari. Southern coast of Southeastern New Guinea from Hall Sound and Mt. Epa eastward to Orangerie (West Irian). Chick, five weeks old. Male, left; female, right.



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Natural Foods and Greens are essential. Failure to persuade birds to eat green food is a common cause of infertile eggs, weak embryos that fail to hatch, and poor feather growth in the chick in the nest or in adults during the molting season. Instinctively, birds will seek supplements needed in their diet when needed. At the zoo we provide sprouted oats or barley in separate 12 inch trays. A handful of hen-size oystershell sprinkled over the green food will attract the adult birds to taste the green food. When nesting, chick-sized oyster shell should replace the hen-sized.

Additional supplements. Crowned Pigeons love peanuts and walnuts. In the winter months either may be fed sparingly, 2 to 4 per bird daily is sufficient

As a food, both are rich and fattening. Too many may cause liver disorders. A half teaspoon of peanut-butter on a small piece of bread may be substituted for the peanuts and is easily digested. In the breeding season small cubes of bread with 1 or 2 drops of wheat-germ oil on each piece will supply vitamin E to stimulate breeding and fertility in your birds. Try it. Too many Crowned Pigeons lay infertile eggs.

SUMMARY:

- 1. Provide large spacious aviary or pens with covered tops.
- 2. Plant trees and shrubs in pen for security.
- 3. Construct artificial nests.
- 4. Do not disturb birds when nesting. Flash bulbs will cause birds to desert

their nests.

- 5. The first seven days of a chick's life are the most critical. Avoid unnecessary disturbance.
- 6. Feed soft-billed food. Large seeds and grain will cause impaction in chick's growing cycle.
- 7. Pens should contain one pair of birds.
- 8. Reproductive life span, 10 years.

Crowned Pigeons, once properly acclimated are hardy and live fifteen to twenty years in captivity. Few birds excel them in beauty and they reproduce readily when provided with the proper conditions for nesting.

Hybridization should be avoided. The future of Crowned Pigeons in this country is challenging. If care is taken that only sound stock is used for breeding, and if caution and restraint is exercised not to overbreed and inbreed, there is every reason to believe that Crowned Pigeons will survive.

I enjoyed working with these giant members of the pigeon family and wish to stimulate further interest among readers by sharing experiences in propagating and breeding these beautiful birds.

Distribution of Forms in New Guinea and Nearby Islands

Family: Columbidae

Genus: Goura (Crowned Pigeon) Goodwin.

Blue Crowned Pigeon - 33 inches.

Goura cristata cristata (Pallas, 1796). Native to northwestern New Guinea (West Irian) from the Vogelkop eastward to the head of Geelvink Bay on the north and to Etna Bay on the south.

Insular Blue-Crowned Pigeon — 29 inches. Goura cristata minor (Schlegal, 1864). Native to the islands Misol, Salawati, Batanta and Waigeu.

Maroon-breasted Crowned Pigeon - 32 inches.

Goura scheepmakeri scheepmakeri (Finch, 1875). Native to the southern coast of southeastern New Guinea from Hall Sound and Mt. Epa eastward to Orangeria (West Irian).

Sclater's Crowned Pigeon — 33 inches.

Goura scheepmakeri sclaterii (Salvadori, 1876.) Native to southern New Guinea from the Mimika River to the Fly River.

Victoria Crowned Pigeon — 30 inches.

Goura victoria victoria (Fraser, 1844.)

Native to Japan Island and Biak Island where it may have been introduced.

Beccari's Crowned Pigeon — 35 inches.

Goura victoria beccari (Salvadori, 1876.)

Native to northern New Guinea from the head of Geelvink Bay to Astrolabe Bay:

Collingwood Bay.



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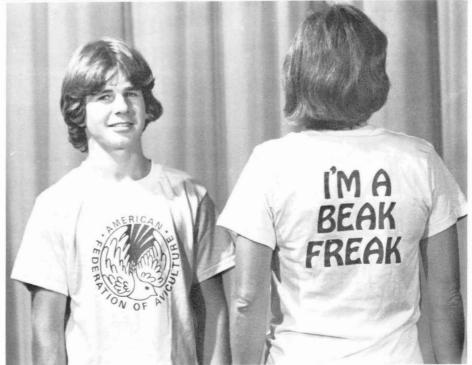
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