

Breeding the  
**Pink-necked Fruit Dove**

at the St. Louis Zoo  
(*Ptilinopus porphyrea*)

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Fruit doves belonging to the genus *Ptilinopus* are among the most brilliantly colored birds in the world. The Pink-necked Fruit Dove with its bright purplish-pink head, neck and upper breast, is surely one of the most colorful of all. Found only in forested mountain areas of Sumatra, Java and Bali (Goodwin, 1983; van Balen and Marhadi, 1989), the Pink-neck was little known to modern aviculture until the mid-1980s. This article reports on the propagation and management of this species at the St. Louis Zoological Park.

A single pair of Pink-necked Fruit Doves was purchased in August 1987 from a dealer who had imported them from Indonesia. The birds were housed in a planted aviary in the zoo's tropical bird house. The exhibit was an area of 18 square yards (15 square meters) and is 12 feet (3.7 m) high. The display is viewed by the public from only one side through piano or harp wire. The wires are spaced 1 inch (2.5 centimeters) apart. Perching is provided by an assortment of natural branches and vines as well as *Ficus* trees planted within the enclosure. Other plants within the exhibit include *Aglaonema*, *Dracaena*, *Philodendron*, and *Shefflera*. The substrate is soil covered with oak bark chips. Skylights illuminate the display and incandescent lighting is added to provide a minimum of 12 hours of light each day. Temperature of the enclosure varies from 25°C in winter to 36°C in summer.

The diet offered to the Pink-necked Fruit Doves was the same diet we had fed to a breeding pair of Black-naped Fruit Doves. This diet includes fruit (apple, orange, banana and grapes), canned vegetables which have been cooked and diced (corn, black-eyed peas, carrots and beets), a small amount of Soft-billed Bird Fare (made by Reliable Protein Products), and supplementation with Vionate and calcium three times weekly. This diet is offered daily at 9:00 a.m. and again in the afternoon if chicks are being fed. The food is offered on an ele-

vated platform one and a half meters high.

This original pair of birds laid their first egg September 25, 1987, 31 days after arrival at the zoo. The egg pipped after an 18 day incubation period. Due to unavoidable human disturbance in the aviary, the chick died before hatching completely. A second egg was laid January 3, 1988 and this egg hatched 18 days later. The chick was closely brooded by the parents, primarily the female. The chick left the nest after 15 days. Although I will refer to this as a fledgling, the chick was very small in relation to the parents. The average of three fledged weights is 75 grams. Weights of adult birds ranged from 153 grams to 195 grams. The chick was always attended by a parent the first few days after leaving the nest and only after three to four weeks was the chick regularly seen without a parent nearby.

The next egg was laid March 1 while the first chick was still in the enclosure. This behavior has been noted for other *ptilinopus* species such as the Jambu Fruit Dove (Roberts, 1991), and Black-naped Fruit Dove (Bohmke, 1990). With the Pink-necked, no aggression was noted and the parent not occupied with sitting on the egg would often attend the chick. The chick was removed about half way through incubation to avoid possible complications. Subsequent chicks were removed from the adults' enclosure after as little as 35 days. No problems have been experienced with the young failing to thrive with this schedule. Chicks have reproduced at one year of age and may mature slightly earlier.

There seems to be little seasonality associated with Pink-necked Fruit Dove reproduction. Eggs have been produced at St. Louis in every month of the year. It is likely that fruit doves in the wild breed in response to seasonal food availability. If food is always abundant, as in captivity, then reproduction always seems to be

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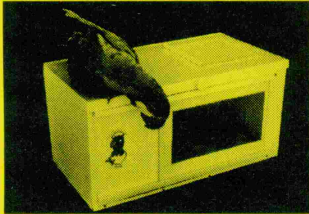
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Photo by Chuck Dresner

Adult male Pink-necked Fruit Dove

appropriate.

As with other doves (Goodwin, 1983), the nest platform is a flimsy affair made out of a few twigs. Both wicker baskets and wire baskets have been used by the Pink-necks. A shallow 1/4 inch (.6 cm) mesh wire cup seems almost irresistible to most fruit doves. The see-through nature of the wire mimics a typical dove nest perfectly. The only problem with wire is the eggs may be easily dented by pressure from an incubating bird. The addition of sink matting, a flexible plastic mesh made to set drying laboratory glassware on, avoids this problem. Generally several nests are placed in what look like good nest locations to humans. The locations are altered if the fruit doves seem to favor a different spot.

Three pairs of Pink-necked Fruit Doves have bred at the St. Louis Zoo. Twenty-eight single egg clutches have been produced with 15 chicks hatching. The average incubation period is 18.5 days. A number of eggs laid were broken during laying or incubation. Fertility has been high with only two eggs found with dead embryos in the shell. Of the 15 hatched chicks, ten survived to independence. At six months of age,

Pink-necked Fruit Doves look like adults.

Determination of sex in both adults and chicks may be a problem. Some aviculturists report they are unable to sex birds based on variation in plumage coloration between males and females. All adults (4.2), received at St. Louis were readily sexed on the basis of the male's purple coloration being a more intense hue than that of the female. The first juvenile plumage is entirely green with yellow feather edging. At three to four months of age, the pink feathers begin to molt. The color of the first two chicks hatched resembled the female plumage when they molted. Both these birds were surgically sexed and were confirmed to be female. The third chick molted in much brighter plumage and closely resembled a male. The sex of all subsequent hatches was determined by differences in plumage color. At least four of eight chicks sexed in this manner have confirmed the sex determination by reproducing. It is possible that diet may play a significant role in determining plumage color. There may also be significant color variation in plumage between birds from different parts of the



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**The Greater Memphis Bird Club**  
**Spring Bird Fair**

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range although only one form is  
described (Goodwin, 1983).

A major difficulty in maintaining  
Pink-necked Fruit Doves is the pro-  
pensity for females to die. At least  
five pairs in different zoos have had a  
hen die. Pink-necks do not seem to  
accept close confinement as well as  
other species of fruit doves. Males  
will not co-exist without a great deal  
of chasing. When pairs are set up,  
males have a tendency to drive the  
females. This can be particularly dan-  
gerous for the female if she is not yet  
sexually mature and cannot respond  
properly. Successful pairs at St. Louis  
have laid eggs within one to four  
months of being put together. Pairs  
which do not reproduce relatively  
soon after being put together may be  
immature, incompatible or inappro-  
priately housed.

Non-breeding Pink-necked Fruit  
Doves are compatible with a wide  
range of softbills and ground birds.  
Breeding has taken place with aviary  
companions such as the Hooded  
Pitta, Bleeding Heart Dove, Magpie  
Robin, Thicknee Plover, Small-billed  
Tinamou, and Yellow-vented Bulbul.  
Aggression towards Pink-necks has  
been instigated by other large pigeon  
species such as the Nicobar Pigeon  
and Black-neck Fruit Dove.

Fruit doves make highly desirable  
display specimens and are relatively  
simple to manage in captivity. Off-  
spring have been produced from at  
least six pairs of wild-caught birds  
and this species seems on the verge  
of becoming established. It appears,  
however, that additional wild-caught  
stock may be difficult to acquire.  
Every effort should be made to man-  
age the birds already in captivity to  
preserve genetic diversity of this  
beautiful fruit dove.

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