Bearded Reedling

Natural and Captive

by Rosemary Flamion, Los Osos, CA

Photo by Diane Racey

Bearded Tit or Bearded Reedling.

The Bearded Reedling *Panurus biarmicus* was introduced to the American avicultural community about three years ago. I was fortunate to obtain three pairs with two pairs surviving. Since I live near a vast wetlands and in a coastal temperate climate, I felt that Reedlings would adjust easily to an outdoor aviary.

Although these small, long-tailed reedbed foragers blend into their native wetlands environment, their tawny and tan tones are striking in an aviary setting. I hear their short wings whirring as they move about in an aviary. Often I hear their metallic contact call "ching", "ching", "ching" sounding like two coins being hit together.

Reedlings are excellent aviary and zoological subjects because of their bold nature, inquisitiveness, complex social behavior, unusual feeding habits, and quiet beauty. Yet few zoos have them on display. As of December 1998, only Berlin (1.0), Durham Zoo, PA (1.0), NY Bronx (0.2), Tokyoueno (1.0) and Zoologischer Garten Koln had specimens. Reedlings are hardy birds and are not usually bothered by humans walking into their aviary.

Systematists used to classify them as in the Babbler Family (Timaliidae), then in the Paradoxornithidae, and more recently in Muscicapidae, the current name for the Parrotbill Family, or Panuridae, the Reedling Family. Not only do the monotypic Reedlings have one genus, but they have only one species as well.

Although Reedlings are exclusively Palearctic (Europe through Asia) and live in north temperate climates, their numbers have been greatly reduced in severe winters. In an outdoor aviary, setting provisions should be made to keep them above 45F and sheltered from winds above 30 MPH. My Reedlings have endured temperatures as low as freezing where I had to break the ice on their pond, but I wouldn't recommend it. I believe that the upper temperatures should be kept in the 70s and 80s with ventilation in summer, cool areas in the aviary, some direct sunlight but also areas of shade.

Reedlings have three different subspecies including the nominate *Panurus biarmicus biarmicus*, found from East Anglia area of England through most of Europe in wetland patches; *Panurus biarmicus occidentalis*, found in the Balkan Region of Europe; and *Panurus biarmicus russicus*, found in southeast Europe, southern USSR, central Asia, and Asia Minor, which has paler plumage than the other two subspecies. Reedlings are permanent residents in most wetlands but may partially migrate to escape harsh weather. They are well known in marshy vegetations, reedbeds, sedge bogs, and freshwater margins and marshes.

Reedlings feel at home in my aviary. I planted my aviary with round bladed rushes such as bullrushes *(Phragmites)*, cattail *(Typha)*, umbrella plant *(Cyperus alternafolius)*, miniature papyrus *(Cyperus papyrus)*, low, flat-bladed sedges *(Carex)*, and grasses such as bamboo, perennial clumping grasses, and others. Some of the plant materials reach the ceiling of the aviary. I pack my aviary with plant materials in spring through summer and reduce the plants during the winter. I have a replacement set of plants if needed.

Reedlings drink, bathe, and feed

from a concrete pond with four pools and a fountain. They will stand in the uppermost pond, bend their knees to get their chests and wings wet. Then they dry off on a nearby perch by shaking and preening. None of them has drowned in the pools. I add duckweed *(Lemna)* and other pond plants to the lower pool. They also enjoy scratching in the large metal tray filled with soil.

Once they were erroneously called "Bearded Tits," but now Bearded Reedling and Reed Pheasant are the correct common names. Bearded Parrotbill is also used.

The French call them *mésànge a moustaches* (meaning tit with a moustache); in Italian, they are called *basettino;* Spanish *bigotudo;* German *bartmeise;* Dutch *Baardmannetje* (meaning bearded male); Norwegian *Skjeggmeis;* Swedish *Skäggmes*; Danish *Skaegmejse;* Finnish *Viiksitimali;* Dutch *Baardmees;* and Japanese *Hige-gara.* Why is it important to learn these common names? Since Reedlings inhabit the areas of the aforementioned languages, scientific studies and ornithological observations in their native lands are important to research.

Bearded Reedlings are about 6 ½ inches (16.5cm) long including the 3" inch tail. Although their adult weight is about 17g, they appear much larger than they weigh. They have short wings necessary for flight in a bed of vertical plant materials. They have relatively long black wading legs, and large feet for holding onto reeds in a breeze. They have three long toes forward and one long toe back. Their black nails are relatively long in order to hold on to plant material. They can use their foot to scratch their head but would prefer their mate to preen them. I have also seen them intentionally stand on a dandelion seed head in order to keep it from moving.

At first fledge, I banded with "J" bands but feel that these are too large. "E" bands would probably be better. Reedling chicks are not bothered by closed bands, family bands, or the banding process.

The eyes of Reedlings are yellow in adulthood with a black iris but totally black as youngsters. They are close-set for greater binocular vision and depth perception. To increase their field of vision when hunting for flying insects, they hold onto the aviary wire or a vertical plant and rotate their head in circles. If they should "lock on" to a flying insect, they can accurately judge its distance. They quickly chase and devour it.

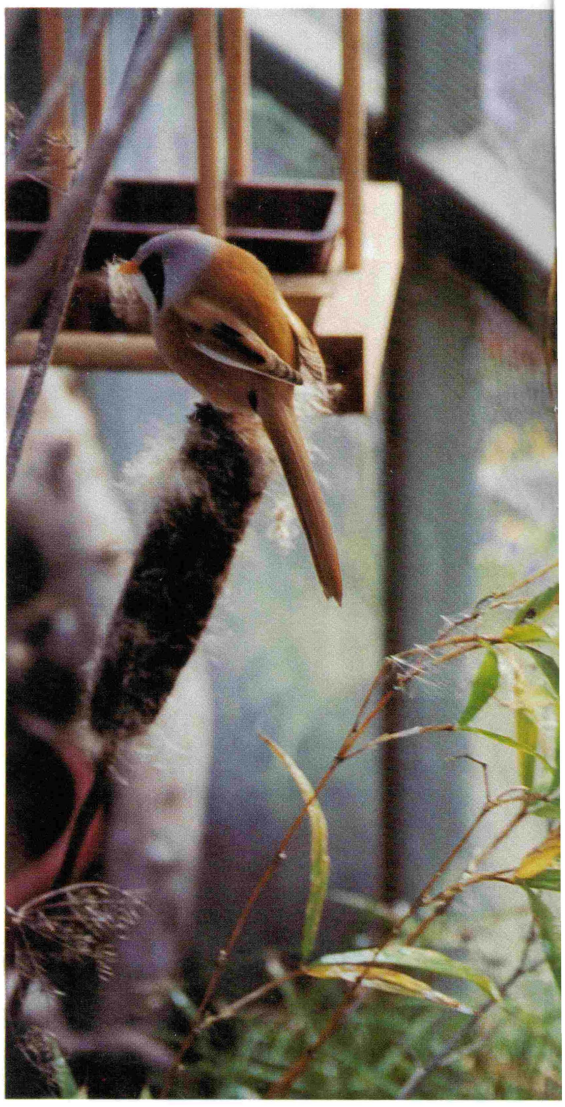

Photo by Rosemary Flamion

Reedling male gleaning cattail fluff with sun on his back.

Photo by Rosemary Flamion

Reedling chick about two months old (in the middle) with two males.

Reedlings are high energy birds and very active during the day and into the evening if I leave on a fluorescent light to attract night flying mosquitoes and other insects. They will lay on the warm soil in a pot to sunbathe.

Reedlings are sexually dimorphic. The males are easily recognized having two black stripes (mustaches) running from the eyes downward into a point. Konig found that the longer the mustache, the more appealing to the female. Hoi found that the male has a copulatory organ, which disappears during the non-breeding months.

The male has a pearl-gray head, bright yellow bill, rusty or rufous colored body, and a long, graduated tail, which is also rufous. The male has black under-tail coverts which seem to

enlarge as breeding season begins and recede during the non-breeding seasons. The small wings (about 8 cm) are barred with black, light tan, and rust lengthwise. Yet these small wings have supported them in 50-mile flights from Holland, across the North Sea, to East Anglia, England, where they have colonized the reedbeds there.

The female is paler than the male with a rufous body and a lighter, greenish-yellow bill. She also has barred wings but the black is nearly absent. During breeding she gets dark areas around her eyes.

Reedlings are monogamous probably pairing for life in the wild. They travel in a colony. I believe the colony is made up of family groups which associate but do not mate within family lines. In the aviary their pair bonds have been unbroken, but I have seen them have extramarital affairs. My most dominant alpha male has pursued the beta female to mate with her and has been successful, while his Alpha mate was sitting on a clutch of eggs. I have also seen two hens and one male mating and two males and one hen.

My Reedlings have had the same pairs for three years continuously. The male and female sleep together in contact. They allopreen, contact perch, and generally keep track of each other throughout the day using their metallic "ching" call for maintaining location. On cold days the cock will shelter the hen under one wing so that they form a single ball of feathers. I have also seen two or three pairs contact sitting all fluffed up looking like one horizontal cattail.

Reedling locomotion includes rapid flights both vertically and horizontally. They climb up vertical stalks with agility and often straddle two blades while moving upwards. They walk, hop on the ground, and like to scratch at soil, jump back and look to see what they have uncovered.

Reedlings will raise or lower their body feathers to regulate temperatures or for expression. Individual body feathers appear to be semiplumes since they do not have barbicels which lock feathers together in a web like most birds. They have the ability to look sleek or to puff up as large as a tennis ball when cold. Body feathers are also two-toned with the lower half gray and plume-like and the outer half tawny and more contour-like. When molting, the gray interior feathering is very noticeable. Individuals will fluff up feathers to solicit their mates to preen or to keep warm. They lower their heads or twist their necks to invite preening which seems to be a great social occupation.

I noticed that they molt once per year after the breeding season. They look very patchily feathered and lose their tails until new, soft feathers replace the old ones.

Primary stimuli for breeding behaviors of most spring breeding birds include increase of temperature, increase in length of day, and availability of food and nesting material. My reedlings did nothing for two breeding seasons even with the above stimuli. Last year I introduced two pairs of Star Finches and also moved the guinea pig hutches closer for increased insect populations. The term *panurgism* indicates a mass conformity in instinctive behavior. When the Star Finch pairs started their nesting activities, the Reedlings may have followed suit. I am wondering if the term didn't originate with these *Panurus*.

In the wild the courtship flight seems to be a pair slowly rising vertically maybe 50 feet in the air and then dropping abruptly back to earth. Finally, the male will exhibit on a stable perch by lifting his crown feathers, puffing out the beard and fanning out his tail. The hen responds with a kind of dance after which she also spreads her tail.

Prenuptial courtship rites are abbreviated in an aviary since the ceiling is only 6 feet high. The male Reedlings are the dominant sexual partner. Chasing the hen seems to increase male hormones. A hen which is not ready to mate is pursued at high speed. A willing hen will join the exhibiting male on a firm foundation like a wooden nestbox lid where the greatest mating success occurs. I have seen them mating on nearly every surface including the aviary sides.

Territorial aggression may occur in their natural wetlands, but it does certainly occur in an aviary 6 feet high x 3 feet wide x 6 feet long containing

Photo by Rosemary Flamion

Reedling chick about four weeks old (still has gape flange, is fully flighted, and tail is beginning to elongate).

two or three pairs. There is definitely a pecking order with the Alpha male the most aggressive and having the longest mustaches. My pairs have nested in opposite sides of the aviary. Ample food probably displaces some of this aggression. Reedlings should never be caged since a roomy aviary suits their energy levels. Ian Hinze (columnist for *Bird Talk* Magazine) suggested the minimum requirements for a Reedling aviary should be 9 feet x 12 feet x 6 feet high.

Reedlings are one of the few bird species which can change their eating habits from herbaceous to insectivorous on an annual basis. Their stomach thickens in spring to be able to handle the rougher seed diet. During spring through summer, they are mainly insectivorous feeding on flying insects such as gnats, fruit flies, mosquitoes, small flies, green aphids, mini mealworms, pond animals such as *Daphnia* and mosquito larvae. They will fish for mosquito larvae if offered in a shallow bowl. Autumn through winter they enjoy a seed diet including cattail seeds, umbrella plant (*Cyperus*) seeds, dandelion seed heads, sow thistle seed heads, Florence fennel (*Foeniculum vulgare*) seeds, and any fruiting marsh grasses, sedges, or reeds. Year round, captive birds are served Purina Trout Chow mini pellets, a finch seed mix, wild bird crumbles or Roudybush crumbles, dried and fresh eggfood and Universal food. They also eat the pond weeds which I add, and they fish for pond insects in the lower pool. They seem to eat everything offered.

In the wild it was discovered that they "...join in pairs when they are only 2 ½ months old and still wear juvenile plumage, although they will not breed until nine months later." (Lorenz 1952)

Last year the adult pairs started breeding in late May and continued through October, which is very unnatural for them. In the wild they usually breed from late April through July. This year their courtship has already started in late February. Mini mealworms or a regular and copious supply of small insects must be available to them if they are to breed in captivity. I found that without enough live animal proteins of the preferred size, they will abandon their clutches.

In the wild Reedling pairs will clutch two or three times during the breeding season. In captivity they could possibly clutch at least five to seven times as mine did last year. They raised only one successful chick last year because of infertile eggs early in the season, chicks getting too cold and didn't gape, lack of the correct size of meal worms, an ant invasion, and reasons unknown.

In the wild both parents build their loose nests by interweaving dried plant material into a basket-shaped container at the base of rushes. They will line this nest with the flowers of *Phragmites* (bullrushes). In captivity, they also weave these nests at the base of plant material in the aviary. They have also created nests inside of hooded woven baskets and assimilated an old Star Finch nest into their design. I have seen them dipping plant material in their pond so that it is more supple. They line their nests with anything that they can find that is soft such as cattail fluff, feathers, or pampas grass fluff.

In the wild hens lay five to seven eggs (as many as 12) which are white and are thinly splotched with brown flecks. These oval eggs are laid at least daily. I observed an egg-bound hen finally pass her egg without assistance and survive. Added calcium in the diet to prevent egg binding may be necessary. They do not start to incubate the eggs until all are laid. In the wild they eat small mollusks (*Succinea amphibia*) which may account for extra calcium intake. In my aviary I have not seen them eat their own egg shells. They just abandon the eggs and will not nest near any old eggs, so removing the old eggs from the aviary is essential.

I observed both parents take turns incubating the eggs with the male relieving the female for short breaks. One of my females created a large brood patch on her lower abdomen to ensure warmth to the eggs and chicks. In the wild a clutch is incubated for 11-13 days as was in the aviary.

In both wild and aviary the young all hatch at the same time. In the aviary if small insects were not readily available at hatch, then the parents abandoned them. If the chicks became cold and did not gape, the parents did not feed them.

The chicks have a distinct gape pattern. When a parent or a human jostles the nest, chicks pop up with their mouths open. I timed the parents feeding about every 2-3 minutes with a few longer breaks during daylight hours.

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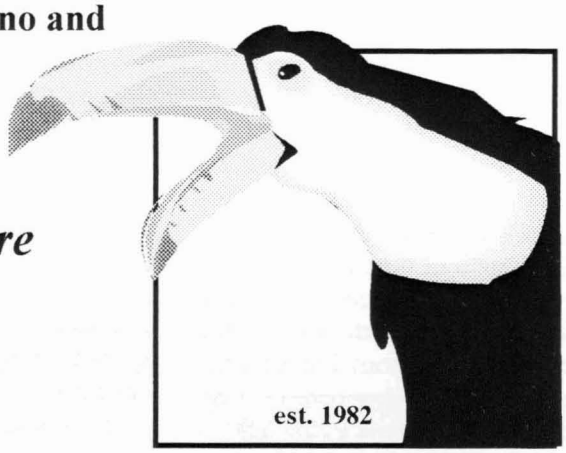

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They do not appear to have a crop as a food reservoir.

The chicks are born naked and with dark skin and a prominent gape, including scarlet markings on the sides of the roof of the mouth, black palate with two arches of tiny prominent white spots, and pale yellow gape flanges. They feather out quickly with dull brown markings: dark back, wing-coverts, sides of tail and black feathers around their eyes. They are not sexually dimorphic at this stage in their life. Their tail feathers remain short for some time, but they can fly easily at 9-11 days without a tail. My chick had adult plumage at 5-6 months.

The parents need to feed these ravenous chicks every few minutes for only 9-11 days. In as little as nine days the altricial chicks will fledge and begin to eat on their own. Only the Corn Bunting and the Reedling fledge in such a short period of time.

After fledging, the chicks will continue to be fed by the parents for a considerable length of time although they are semi-independent feeders by then. The family stays intact. So far, the female which was born last summer still has a bond with her parents, who will contact sit with her between them and allopreen with her. Hintz suggested that the young birds be removed from their parents, probably because they might interbreed, but I have found no sexual activity between father and daughter.

The Reedling aviary is double wired with ¼ inch wire on the inside to protect from predators. Recently, when a Cooper's Hawk invaded my yard, the Reedlings disappeared near the base of an umbrella plant for at least an hour. They must have a protected place to feel safe in case of danger, real or imagined.

Reedlings do not think of me as a predator. They go about their business with me in the safety room or even in the aviary. They show very little fear of human intervention and have a high degree of curiosity. The Alpha male has challenged me on occasion if I have been too near his nest. He faced me, flared his wings at me, and "ching-ed" really loud at me.

Usually, both parents will leave the nest with human intervention and will return shortly to the nest. They do not seem to mind brief nest inspections.

I introduced two pairs of Star Finches (also wetland birds) into the aviary. The Reedlings being larger birds are not intimidated by Star Finch bluffs. Both species get along well. Although there is some aggression between species, such as chasing, nipping, posturing, it is not enough to warrant removing the Stars. Both Stars and Reedlings breed with their own species in this small aviary. Aside from the Stars, in my opinion a small, mixed aviary probably isn't the wisest decision if Reedlings are going to successfully breed. Five Reedlings and four Star Finches in my aviary having 108 square feet is enough.

Longevity is unknown with this species. The age of my three pair was unknown. I have had two pair for a little over three years. One hen may be showing age by a lighter tail feather.

Habitat destruction is endangering the species in Europe. Conservationists in many European countries have returned some of the wetlands back to their original status and the Reedling populations have blossomed. I do not know the status of these birds in Russia or China.

In closing, captive bred Reedlings are a joy to observe. My Reedlings have made me appreciate not only their quiet beauty, their habits and social behaviors, but also the reedbeds where they live in the wild. Zoological gardens and individuals can learn much from these feathered friends. Perhaps learning to raise them in captivity will ensure their genetics not being lost if they should ever need reintroduction into their native habitats.

I recently showed my aviary bred Reedling hen in a National Finch and Softbill Society bird show at the America's Family Pet Expo in Pomona, California. Since it was my first NFSS show, I didn't know what to expect. On the first day of showing Judge Paul Williams ranked her Best of Show even though she showed the exuberance of youth. She went on to capture overall Best of Show over the top lovebird, Cockatiel, and parrot.

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