

Breeding Cissas and Other Asian Corvids

Photos and Text by Roland and Ilana Cristo

FAMILY – CORVIDAE
SUB-FAMILY – CORVINAE
TRIBE – CORVINA
CISSA

"Cissa are perhaps the most beautiful of the whole family." (Delacour).

Of all the birds in the Corvid family, Cissas are perhaps the most sought after in aviculture.

There are three species of Cissas with 12 sub-species. The Green Magpie (*Cissa chinensis*), also known as the Long-tailed Hunting Cissa in aviculture, comes from the Malay Peninsula up into Annam (Vietnam) and as far north as China. Four sub-species are on the mainland with one sub-species, *C. c. minor*, coming from the islands of Sumatra to Burma. We have the mainland sub-species, *Cissa c. klossi*, and *Cissa c. minor*, the island sub-species, which is smaller than the mainland birds.

The Short-tailed Hunting Cissa (*Cissa thalassina*) comes from two islands, Java and Borneo. We have a female of the Javan sub-species *Cissa t. thalassina*. The Short-tailed has quite a musical song much like a songbird's. The other species we keep don't seem to.

Three sub-species of the Yellow-breasted Magpie (*Cissa hypoleuca*) come from Annam (Vietnam), Laos, and Thailand. There are two isolated sub-species in China. The Yellow-breasted have a longer crest and display it far more often than the other species. The species we keep are the nominate *Cissa b. hypoleuca*.

HABITAT

Cissas live along the border of the subtropical and tropical forest from sea level to 1800 feet +/- . In their natural habitat, they spend most of their time in the lower shrubs and are generally not seen

but heard. When not breeding they gather in small parties and move through the forest, joining forces with laughing thrushes. They feed close to or on the ground consuming small insects, small reptiles and birds.

They are solitary nesters, the nest being described as a "large, rather flat platform of twigs interwoven with leaves bamboo and roots, cup lined with finer plant material, built in low shrubbery, bamboo thickets, vine tangles in the canopy of a small tree."

Cissas are a little larger than the American Blue Jay (13-14 inches). They are a beautiful light green color with chestnut-red colored wings, a black mask and red-orange beak, feet and eye ring. The green color seems to fade to a light blue color in captivity if the birds are exposed to too much sunlight and perhaps not given enough carotenoids in the diet. The males seem to turn more bluish than the females. The young we have raised all had bluish or turquoise feathers. Interestingly, Lynn Hall, fruit dove breeder and expert, informed me of seeing recently caught birds that were entirely blue at bird markets in Singapore. They do seem to spend most of their time in the aviary shelter or in the shade of the plants in the aviary.

The word "hunting" does describe the method the pair uses to capture their prey. When the prey (usually a feeder mouse) is spotted in the grass; the pair of cissas will stalk it together (like a brace of dogs) on either side of the aviary until it is cornered. At that point the male will usually make the kill.

HOUSING

We live at an elevation of 1200 feet and the temperature gets below freezing at night during the winter (down to 15 degrees). The birds are

housed in walk-in flights, 3 X 4 feet wide and 16 to 20 feet long. The flight sections are 6 feet high. The undercover sections are 8 feet high and 4-6 feet long and covered on three sides. The perch in this section is 2 feet higher than the perch in the flight area. This protects the birds from any wind. We have automatic waterers that continually drip. The central aisleway has a night-light. It provides just enough light to allow the birds to see where they are going if they were startled off their perches.

We have a mister system that is controlled by a 96-setting timer (timed for every 15 minutes) and a thermostat. Each one can override the other. When the temperature goes above the thermostat setting it will turn on the misters if the timer is at an on setting.

We try to plant at least one *podocarpus* plant in the aviary. In fact the long-tailed Cissas have built their nest in it two years in a row.

FEEDING

Basic Diet

The Cissas are fed "soft food" mix (appendix A) daily along with ground beef heart (Chili grind) and mealworms. The soft food is a moistened mixture of the basic diet. Defrosted mixed vegetables are added to the soft food every other day. Dry food mix (appendix B) or basic diet is kept in their cage constantly. Ingredients for both are listed later in this paper.

Mice

We feed mice sporadically throughout the year. When the hen starts building her nest we feed mice daily in the early morning. Once the hen is setting, we feed mice again in mid-afternoon. The mice are served live in a mixing bowl. We believe this helps keep the male occupied. We have had males that predated

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eggs stop doing so when fed mice every day during the nesting period.

In earlier years we fed mice four times a day when babies were on the nest. By the 21st day we were feeding 20-25 mice a day. Since then, once the young are half feathered or more, at about 12-14 days, we feed mice only in the early morning and in the evening. At noon, they get another serving of ground beef heart.

BREEDING CISSAS

We have bred Long-tailed Cissas every year since 1997 and Yellow-breasted Cissas since 1999.

NESTS, NESTING, AND BREEDING

We buy baskets from import stores and nurseries to use for nesting receptacles for the birds. The approximate dimensions vary from year to year. This year the baskets measure 9 inches inside diameter at the top and are 5 inches deep. What we look for after the nest is built is to only see the hen's head while she is setting. She is still able to see over the edge when she sticks her head up.

We mount the baskets onto an upside down "L" shaped platform in such a way that eggs and young can be checked on a regular basis without any difficulty of taking down and putting the nests back up. We place the basket up in a corner of the shelter section. We have had hens that nest from 4 feet off the ground to 7 feet (top of shelter).

We use "rushes" (appendix C) as nesting materials. We have had hens that built a neat nest in one day. We have found that if not enough material is provided at one time for the hen to complete her nest she will build and tear down her nest.

There are times when a hen will lay her eggs in a basket without constructing a nest. When we have a hen that doesn't build a nest we will construct a nest for her out of rushes with mowed grass at the bottom of it. The birds will sometimes immediately lay in such a nest. But most of the time they will tear it apart until such time as they are

ready to lay. Therefore it is a continual job of us rebuilding their nest until eggs are laid. Once eggs are laid they generally don't tear the nests apart. We have done this with Cissas, Blue Magpies, Treepies, and Jays with good results.

The hen will generally lay 3-4 eggs, one each day. She will "set" between the first and the second egg. During incubation, there doesn't seem to be many problems. Incubation is 18-20 days. Chicks are hatched bare-naked and look like food.

The male keeps vigil guard. At first the hen will come off the nest when hearing someone approach the flight. Shortly into incubation, she will "set tight" unless someone comes into the aviary to drop mice in their feeding bowl. As the incubation continues, she will stay on the nest even after the flight door is opened, especially when the eggs are close to hatching. At this time, the male sounds an alarm or becomes aggressive, she may leave the nest temporarily always going to a high perch. (the Yellow-breasted always go to the ground). About two days prior to the eggs hatching, the male seems to become even bolder and more aggressive hitting me on the head as I feed mice in the mornings. Once chicks hatch the pair seem to be devoted parents.

In about 18-20 days, the eggs begin to hatch, showing completely naked, sightless, and helpless chicks. The parents feed the chicks mealworms and pieces of mice for the first 3-4 days after hatching. After 3-4 days the parents stop feeding mealworms. After 5-6 days, the numbers of mice given the parents are increased to 3-4 per feeding and served 2-3 times per day. It appears that all parts of the mice are either fed or eaten by the parents. Remnants of the mice could not be found. The parents throw up castings much like raptors do.

Babies have pinfeathers at approximately 11 days. Their eyes open at 12 days. Up to approximately 12-14 days old, the parents are given 10-15 mice per day and served three times per day. The par-

ents stopped eating soft food and beef heart for a while. It was quite hazardous serving the pair. The female would leave the nest calling and complaining and the male would scold and dive at the person entering the aviary. The offering of food meant nothing to him. He even drew blood from my ear.

The babies grow quickly and the food offered is also increased. At approximately 20 days the oldest or strongest (we assume) baby starts to perch on the edge of the nest. The rest perch shortly after, about 2-3 days.

At about 25 days the chicks are standing on the perches away from the nest. They could be found on the ground and are able to hop and scramble up the perches to the highest perching "branch" and nest. During this entire time they are always fed soft food, and ground beef heart. At about 24 days old, the soft food mix and more beef heart start to disappear. We never actually see the chicks eat the food but the amount was increased and it always seems as though less was left. They also start to eat the dry mix as more of that disappeared also.

The amount of mice served is decreased and the amount of beef heart and soft food is increased. At 29 days, the chicks are increasing their activity and will fly to the "outside" perches and hop along the branches and perches. They start to call and scold like the parents. The Yellow-breasteds will fully display their crest feathers. At 31 days their landings are much more accurate. Soft food consumption increases along with that of ground beef heart.

The young have all feathered out a powder blue color. We presume this is due to the lack of carotene in the diet the young are being fed, as the basic diet for the first two weeks is meat. They don't become the same color as the parents until they go through their first adult molt. They appear to be a blue-gray color instead of the turquoise or light green of the parents. Their beaks are also grayish in color and their feet are a fleshy pink color instead of the adult orange

color.

OTHER ASIAN CORVIDS

The Blue Magpie (*Urocissa erthrorhyncha*) and the Rufous Treepie (*Dendrocitta vagabunda*)

Blue Magpie

These birds are very much the same shape as our common American Magpie. Body size is about twice that as our Blue Jay with a long graduated tail, total length approximately 26 inches long.

Their head, neck, upper mantle, and upper breast are black. There is a large pale whitish area from near or mid crown to nape and hind-neck. The breast is off-white to white in some birds. The upper parts are a dull medium blue washed mauve; upper tail coverts scaled black; wings, mantle, and upper-tail mauve blue with each feather tipped white. The bill and legs are red. No obvious sexual dimorphism is apparent. There are five races recognized.

Habitat: They can be found in subtropical and temperate foothill evergreen forests between 300m ascending to as high as 3,000m in the summer. They range from Eastern and S. Eastern Asia along the Himalayas, Foothills north and east through most of eastern China.

Blue Magpies are arboreal birds, moving in small parties, frequenting clearings and ravines. Their diet is much the same as Cissas to which they are closely related.



Yellow-breasted Cissa



Short-tailed Cissa female

Breeding: It is very interesting to watch the male display to his mate. He will face his mate and approach her walking along the perch. He will tip his body to one side. He partially spreads his wings and raises and spreads tail while singing a low pitch song to her.

We have bred the Blue Magpie for several years. The ecology is comparable to the Cissas. We use a similar basket that is larger.

Rufous Treepies

Treepies are a little bigger than Cissas and smaller than Blue Magpies. They are approximately 19 inches long including the tail. The tail is 11-12in. long. The head, neck, breast and upper mantle are a sooty black to black (hens are normally less intense black). The mantle, back, and scapulars are a darker brown-rusty orange; wing coverts and tertials are a pale grayish white continuing with the brownish-black of the rest of the wing. Tail feathers are grayish white to white ending in a black terminal band. The two central feathers are elongated. Sexes are very similar.

Habits and Habitat: The Treepies range from Pakistan east

through all of India to southern Vietnam. They are found in most habitats throughout their range and are considered one of the most common birds in India. They move about in pairs and small parties associating with pigeons and barbets.

They rarely spend time on the ground. Their diet includes invertebrates, fruit, small birds, lizards and rodents.

In Captivity: During display the birds will face each other bowing and touching beaks. The call is fabulous. It is a loud metallic flute/bell-like sound done first by the male then female. We have bred the Treepies for three years. Their breeding requirements are similar to the Cissas although they are not as dependent on mice to feed their young.

CISSAS, BLUE MAGPIES, TREEPIES AND AVICULTURE

Corvids (crows, magpies, jays) comprise a family of more than 100 species. They are distributed world wide except in the Polar Region. As aviary subjects, they are fascinating and very intelligent. These three species particularly so.



Rufous Treepies

They shouldn't be kept in a mixed species aviary, unless the aviary is very large, well planted and the other birds are similar or larger sized. They are fascinating, kept as pairs. They are easy to care for and long lived. There have been accounts of Blue Magpies living for more than 20 years.

Information on keeping and breeding Cissas is sparse and inaccurate. For example, in our research, the information on Cissas states that they are reclusive. Our experience from working with the three species is that they are bold and curious. Unlike the Blue Magpies and the Treepies, the Cissas are at the feed trays every morning as we place the food in the aviary.

In captivity, the Blue Magpie is the most commonly kept bird followed by the Cissas then the Treepies.

The basic problem with these species is the lack of communication between individuals who keep

them. This is true with many species though. Without communication through some kind of forum and



These Yellow-breasted and Long-tailed Cissas have just been released from quarantine and are happily adjusting to new aviaries belonging to the authors.

studbook set-up, aviculture in the United States will lose most of the fascinating birds it has known.

For several years a group in the AFA has tried to start a "Softbill Society" with no success.

The National Finch and Softbill Society has been around for many years. It's about time that those I'll call the "AFA Softbill" people join NFFS and start working with their birds in the Finch and Softbill Save program.

My fascination with corvids began when at the age of 12 I helped my brother hand raise over 20 native magpies and some crows. Through the years, I have found that the corvid family is far more intelligent than any of the birds I have worked with, including any psittacines. Plasse & Angell write "Of all birds, Corvids have the largest cerebral hemispheres, relative to their body size. Under operant conditioning methods, crows have been found to be superior in intelligence to all other avian species tested."

Ilana's fascination with corvids began in 1964 when she hand raised an Eastern Blue Jay. It proved to be an intelligent, mischievous clown. It kept itself busy and amused by causing chaos and teasing all the other birds in the house. It was very bold

and always stole objects from pockets and various places in the house to hide them somewhere else. This is a natural behavior but none the less frustrating and comical. It was later acclimated back to "nature" and set free.

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APPENDIX A

Soft Mix

1 part Kaytee Mynah pellets
1 part Purina Nutriblend Green pigeon feed
1 part Dog food
1 part game bird chow (crumbles)
2 parts defrosted frozen mixed vegetables
Soak each of the parts above, except game bird
chow, individually in one part water each,
when the soaked parts are softened, mix all
parts together.

APPENDIX B

Dry Mix

1.5 parts Purina Nutriblend Green pigeon feed
1.0 parts Kaytee Mynah pellets
parts Science Diet light cat food

APPENDIX C

Rushes – Juncus

"Rushes somewhat resemble grasses, with leaf
like, cylindrical stems and tiny, inconspicuous
flowers clustered near stem tips. Specialists usu-
ally suggest planting them with grasses or
aquatic plants at the edge of a pond or stream,
in water" ♦

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