Species Fact Sheets

Order:	Coraciiformes	**Family:**	Momotidae
Scientific Name:	*Momotus momota*	**Common Name:**	Blue-crowned Motmot

AZA Management: ☐ Green ☒ Yellow ☐ Red ☐ None

Photo (Both Male & Female):

Motmots are considered monomorphic and should not be assigned a gender without suitable testing. Blood or feather samples are the preferred testing method in most cases.

NATURAL HISTORY:

Geographic Range:	Europe	☐	Asia	☐	North America	☒	Neotropical	☒
	Africa	☐	Australia	☐	Other	Click here to enter text.		
Habitat:	Forest	☒	Desert	☐	Grassland	☐	Coastal	☒
	Riverine	☒	Montane	☒	Other	Click here to enter text.		
Circadian Cycle:	Diurnal	☐	Crepuscular	☐	Nocturnal	☐	Other	Click here to enter text.
Cold Tolerance:	To 70° F	☐	To 60° F	☐	To 50° F	☐	To 40° F	☐
	To 30° F	☒	To 20° F	☐	Other	With supplemental heat source.		
Heat Tolerance:	To 30° F	☐	To 50° F	☐	To 70° F	☐	To 90° F	☒
	To 110° F	☐	Other	Click here to enter text.				
Diet:	Frugivore	☒	Carnivore	☒	Piscivore	☐	Insectivore	☒
	Nectivore	☐	Omnivore	☐	Folivore	☐	Other (Add Below)	☐

Captive Dietary Needs:

Blue-crowned Motmots generally sit quietly hidden in shady trees searching for prey items, fly catching insects and pouncing on small land dwelling animals. Blue-crowned Motmots also use their heavy set, deeply serrated bill to brush away leaf litter and probe into the earth searching for prey items. If the prey item eludes the motmots first capture attempt, the motmot may hop in pursuit. The prey species may include: small lizards, frogs, birds, small rodents, arthropods, centipedes, spiders, butterflies, cicadas, beetles, and mantis. Trace quantities of fruit will be consumed as a portion of the diet. Research by Orejuela in the Yucatan Peninsula found that 84.2% by volume of the diet of Blue-crowned Motmots was comprised of insects. The remainder was found to be gastropod mollusks, arachnids, and chilopods, with a small portion of fruit and plant reproductive parts. This consumption

would be regionally influenced and would depend heavily on food items available within the home territory of the motmots (Orejuela, 1975). A study of the stomach contents of 52 Blue-crowned Motmots found that 61.5% contained arthropods only, 21.2% contained arthropods and fruit, 15.4% contained fruit only, and 1.9% contained unidentifiable mush.

Large food items are caught and taken to a perch where the item will be repeatedly bashed against the tree branch or rock to kill and tenderize the prey item. After the pulverizing is complete, the food item is swallowed whole.

The observation of wild motmot nests has shown that the chicks are not fed fruit until the young were at an average of approximately 13 days old, and even from that point on it was offered as a very small proportion of the overall diet.

A wide variety of diets have been used successfully by institutions, all of which are similar in basic components. The diets are based on a combination of proprietary pellets, bird of prey meat, insects, pinky mice, and a small portion of minced fruits/vegetables. Location of the diet does not appear to influence the consumption levels as motmots routinely feed on both arboreal and ground dwelling food items.

Life Expectancy in the Wild:	Males And Females:	There has not been significant research done on wild life expectancy; however banded individuals have been reported captured more than 15 years after their initial banding.
Life Expectancy in Captivity:	Males and Females:	Both males and females have been recorded to frequently live into their early twenties in captivity. Males have been recorded to be reproductively viable until twenty-four years of age, females until eighteen years of age.

BREEDING INFORMATION:

Age at Sexual Maturity:	Males and Females:	Both males and females have been observed to successfully reproduce in captivity at eleven months old. However, reproduction is generally not reliable until the birds reach at least two years of age.

Courtship Displays:	Although the nest chamber is unlined, courtship rituals between the pair still include the male offering leaves, twigs, grass, and flowers to the female. This courtship offering behavior has been observed regularly in both the wild population and in captive settings and appears to reinforce the pair-bonding. Penduluming of the tail increases in speed, frequency and duration when the birds are excited, whether that is due to pair bonding and courtship behavior, feeding behavior, or territory defense.

Nest Site Description:

Nest tunnels are generally dug during the rainy season when the soil is soft, which over the geographic distribution ranges from August to October. Blue-crowned Motmots generally prefer to excavate their tunnels into the sides of cliffs or into horizontal ground, but will use rock crevices on occasion if suitable nesting sites do not exist within the territory. Both the male and female share relatively equally in the digging tasks. The excavation of the nest tunnel system and the terminal nesting chamber can take as long as 2 ½ months to complete. The timing of the work is focused primarily on the late morning until the late afternoon when the soil is typically the driest. It is not unusual for the motmots to begin and abandon several nest tunnels before settling on one particular area.

With the intrusion of man-made structures into the habitat of Blue-crowned Motmots has come the introduction of new nesting opportunities in the way of roadside berms, banks, and cliffs. In some areas this intrusion has allowed the motmots to attain a higher population density then was previously possible in pristine habitat.

The excavation efforts will result in a long, winding burrow typically measuring at least 5 feet in length, but ranging up to 14 feet in length and 3-4 inches in diameter, with the unlined terminal nesting chamber measuring approximately 10 inches high, 10 inches in width, and 14 inches in length. The winding nature of the tunnel system aids in the avoidance of nest predation by shielding the nesting chamber from being viewed from the tunnel mouth. This winding tunnel system may also be the result of obstructions such as rocks or root masses being encountered and avoided during the excavation. The entrance to the nesting burrow may be concealed by root masses or overhanging vegetation.

Another method used to attempt to limit nest predation is each parent undertaking extended incubation bouts to limit the amount of activity around the entrance to the nest tunnels. Typically, the incubation shift of each parent will last at least 3 hours, with some shifts lasting more than 8 hours. There have been reports of the motmots relieving each other only twice during the course of the day, once at dawn and once at dusk. This behavior has been observed in both the wild by Alexander Skutch and in the captive population at various participating institutions.

After the tunnel system is completed, including the nest chamber, the birds abandon the area until the following March or April, the onset of the breeding season. At this point, the birds will return to the area for the onset of the nesting season. Motmots in the higher elevation regions have been observed roosting in the nest burrow during the non-breeding season. This behavior is thought to be climate dependent, since those motmots found in

more tropical regions of their distribution do not roost in the nesting cavities during non-breeding seasons.

No recorded evidence of nest sanitation by motmots has been observed, which would explain the typical behavior of digging a new nest tunnel each breeding season. It has been observed that motmots do not reuse the same nest site in successive breeding seasons. Even with the absence of nest sanitation, the motmot chicks exit from the nest tunnels in immaculate feather condition.

After the courtship rituals have concluded, copulation between the pair, which lasts 5 to 10 seconds based on captive bird observations, occurs in late April to early May. The female will then lay 3 to 4 white eggs, each measuring approximately 26 mm in length and 23 mm in width. Incubation lasts approximately 21 days, during which time one bird will incubate from early afternoon until the following dawn, before being relieved by its mate for incubation during daylight hours. By only relieving each other from incubation duties twice daily, movement around the nest tunnel entrance is kept to a minimum.

Clutch Size, Egg Description: The female will typically lay 3 to 4 white eggs, each measuring approximately 26 mm in length and 23 mm in width. Incubation lasts approximately 21 days, during which time one bird will incubate from early afternoon until the following dawn, before being relieved by its mate for incubation during daylight hours. By only relieving each other from incubation duties twice daily, movement around the nest tunnel entrance is kept to a minimum.

Incubation Period: Approximately 21 days

Fledgling Period: Approximately 28 days

Parental Care: After hatching, the parents alternate brooding, with the female being primarily responsible for the brooding and the male providing most food items. When the offspring are approximately one week old, both parents will be out of the nest occasionally hunting for food. Initially, the feeding will occur at 2-5 minute intervals, with the parents focusing almost exclusively on live food such as crickets, mealworms, waxworms, and earthworms. The frequency of feeding will decrease as the hatchlings age, with the trips into the nest dropping to 5-6 per hour within two weeks post hatching. The parents begin to offer a variety of live insects, pinky mice, and other protein-based food items almost immediately post hatching, and pelleted food items at approximately day 12-14 post hatching, although live food continues to be the overwhelming preference.

Chick Development:	Blue-crowned motmots are altricial, and thus the parents must provide for all needs. Feather shafts will begin to emerge from the body at approximately 7-9 days of age, and the eyes will begin to open at approximately 14-15 days of age. After 29-31 days in the nest, the offspring will begin to make their way up the tunnels towards the entrance, by which time they will look similar to the parents, with the exception of them being somewhat smaller and lacking the racketed tail. After exiting the nest tunnels, the fledglings are extremely weak flyers for the first day or two and exhibit difficulty in perching due to their subterranean development. The young gain independence relatively soon after fledging, some being observed self-feeding within 3-4 days. Approximately two weeks after leaving the nest tunnels, the young are consistently self-feeding, and 3-5 weeks post fledge the offspring will have gained complete independence from the parents.

CAPTIVE HABITAT INFORMATION:

Social Structure in the Wild:	A single pair may be housed with offspring for up to one year depending on circumstances. Parents will begin to drive juveniles out of their territory when the next breeding has begun. In the wild this would be a yearly event, in captivity multiple breeding attempts per year are regular so young birds may need to be removed as soon as they are self-sufficient.
Social Structure in Captivity:	Pairs or single-gender groups. Multiple pairs in one exhibit space are typically not recommended regardless of the size of the enclosure.

Minimum Group Size:	One bird, though at least two is recommended.	Maximum Group Size:	A pair with offspring or a single-sex grouping (size of the group is determined by the size of the enclosure).

Compatible in Mixed Species Exhibits:	Varies	**Comments:**	Typically can be housed with a wide range of enclosure mates. Birds weighing less than 25 grams may not be compatible with motmots. Blue-crowned motmots should never be housed with Plush-crested Jays. There have been numerous injuries and fatalities in both species when this arrangement has been attempted.

Optimal Habitat Size:	Motmots have been successfully housed and bred in enclosures ranging from three foot wide, eight foot long, and eight foot high to full-sized walk through aviaries. Ideally, a minimum enclosure size of approximately one-hundred square feet with an eight foot high ceiling would be preferred.

Management Challenges:	Generally fairly easy to maintain, however there are some challenges to watch for. Because they prefer to burrow their nest tunnels, loose soil in the exhibit can cause the tunnel to collapse if the weight of a person crosses the top of the tunnel. Also, there have been infrequent issues with aggression towards extremely small enclosure mates such as dacnis, euphonia, small tanagers, etc. Due to significant and repeated incidents of aggression motmots are not recommended to be housed with plush-crested jays under any circumstances.

ADDITIONAL COMMENTS:

IUCN Least Concern, at this time the wild status of blue-crowned motmots is not listed as threatened or endangered, in fact blue-crowned motmots are common throughout much of their native range. Due to a wide geographic range, tolerance of intrusion by man, and numerous protected areas comprising habitat blue-crowned motmots as a species should continue to thrive.

While most of the twenty-one recognized subspecies of blue-crowned motmots are considered to have a stable and/or increasing population, several of the subspecies are under significant pressure due to habitat destruction within their range. It is not expected that blue-crowned motmots will become endangered or threatened in the near future, however these particular subspecies may be of concern.

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