

Socorro Dove Breeding/ Release Program

by Luis F. Baptista
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Socorro Island, the largest of four islands that comprise the Revillagigedo Archipelago, is situated about 240 miles south of the tip of Baja California, Mexico. The island is approximately nine miles on each side, and rises to 3700 feet at Mount Evermann. Ten taxa comprise its landbird fauna, including four endemic species and six endemic subspecies. The former includes one endemic genus, the Socorro Mockingbird (*Mimodes graysoni*).

In 1867, the noted wildlife artist Andrew Jackson Grayson and his son Ned visited the island. On the 20th of May of that year Ned returned from a morning of exploring and hunting exclaiming with the joy of discovery, "A new dove, a new dove!" Ned had discovered what we today know as Grayson's Dove or the Socorro Dove (*Zenaida graysoni*).

The Socorro Dove is a striking species. It is a close relative of the Mourning Dove (*Z. macroura*), but the former is about 40 percent heavier than the latter species. It is ruddy brown in coloration with red feet and a red bill that is black near the tip. The tail feathers are grey at the apices and are squarer at the tip than those of the Mourning Dove.

Typical of island species that have not experienced many predators, Socorro Doves are naturally tame. Dr. Sterling Bunnell Sr., a member of the California Academy of Sciences 1903 expedition to the island, records in his diary that upon seeing an approaching human "they immediately run to meet him and walk to within one meter to look at him sideways or fly to an adjacent limb." Dr. Bunnell actually walked up to a perching dove and touched its feet.

Continued on page 14

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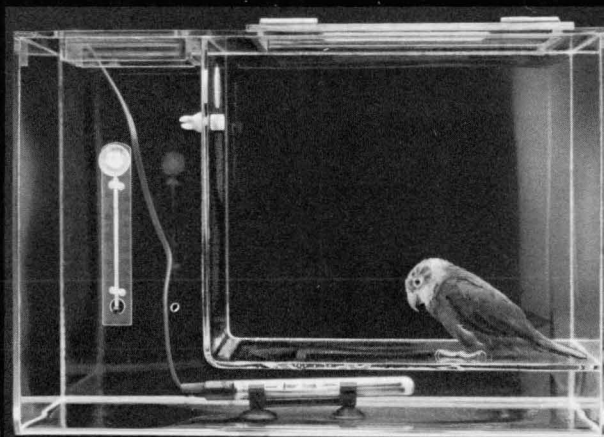
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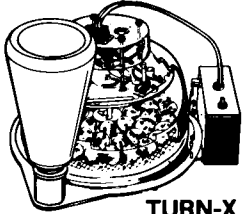
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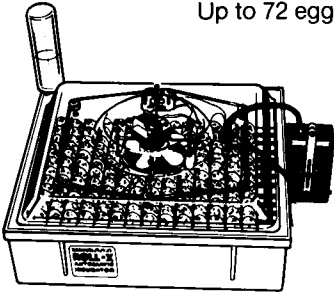
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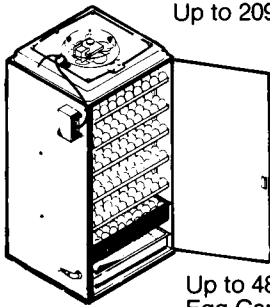
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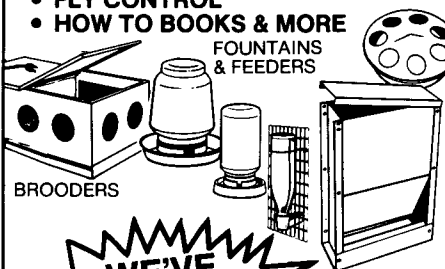
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Alas, the inadvertent introduction of sheep and cats to the island has led to the extinction of this beautiful dove in the wild somewhere between 1958 and 1978. Fortunately, this beautiful dove still exists in aviaries.

Dr. Sterling Bunnell Jr. (son of the explorer above), a few friends and I founded the Island Endemics Foundation in 1990. This is a non-profit institution dedicated to breeding and eventually repatriating the Socorro Dove to its ancestral home. The project is in cooperation with aviculturists in the U.S. and Germany, and with Mexican wildlife agencies, namely SEDUE (Secretaria de Desarrollo Urbano y Ecologia) and CIB (Centro de Investigaciones Biologicas).

Fifty pairs of Socorro Doves are being assembled in the Foundation's breeding centre in California. German and American aviculturists will act as reserves to ensure that not all breeding stock is in one centre, and to furnish additional doves for release.

An annual census of doves in captivity in the U.S. is being conducted by John Pire of the Pigeon and Dove Society. A similar census is conducted in Germany by Dr. Gunther Nogue of the Cologne Zoo, one of the coordinators of the German breeding consortium. In cooperation with Dr. Robin Lawson of the California Academy of Sciences' biochemical systematics laboratory, a DNA-fingerprinting study has been initiated to determine the amount of inbreeding in captive stock, and to aid in selecting unrelated birds for pairing. As all captives are probably descended from very few ancestors it is imperative that we assess the diversity in the captive gene pool. Stud books of German and American birds will be kept to guide breeders in determining optimal pairings.

Meanwhile, Dr. Hartmut Walter of UCLA, several Mexican biologists, Helen Horblit of Island Endemics and I have made regular trips to Socorro Island to census some of the other endemic species to identify other taxa in need of immediate attention. In one of these trips in 1989, we found a small isolated population of the endemic Socorro Mockingbird, once thought to be extinct. We have since found other small populations, and plans are underway to bring some of these birds into captivity for a captive/release program.

Our Mexican colleagues are initiat-

ing a program to remove the sheep and cat populations on the island. Once this is done, we can begin reforesting the portion of the habitat on the southern slopes destroyed by sheep overgrazing. I estimate that it will be at least five years before the first dove releases may take place.

Medical screening will ensure that only healthy doves will be repatriated. A quarantine program will be enforced to ensure that no pathogens alien to Socorro will be introduced. Part of this program will be a survey of pathogens already established in the Socorro avifauna. Dr. James Michael Harris, D.V.M., well-known to many AFA members, is in charge of this program.

Aviaries will be constructed in selected sites in the highland forests of Socorro Island to "soft-release" Socorro Doves. This method has been used successfully in a release program involving Mauritius Pink Pigeons (*Columba mayeri*). Basically aviaries will be constructed over groups of trees. Doves will be placed therein and provisioned. Meanwhile, they will also "learn" to feed on natural foods (fruit and seeds) provided by the trees in the aviary. Hatches in the aviary will be opened, but landing platforms with food dishes will be provided, allowing birds to leave and return at will. Eventually, as with the Pink Pigeon, it is hoped that they will stay farther and farther away and become established. Doves will be radio-tracked during the initial stages of the release program. It is hoped that at least 50 squabs a year from our breeding centre and from private breeders will be available for release. Annual releases will continue until the species is re-established.

We have every confidence of the success of this program. First, the original habitat still exists and, once the feral animals are removed and with a minimum of management, we expect the habitat to revert back to its primordial condition. Second, Socorro is an island ecosystem administered by the Mexican Navy who have provided their fullest cooperation. No development of the island is expected and plans are being implemented in cooperation with Mexican wildlife authorities to make the island a nature reserve to preserve its unique biota forever for posterity. We look forward to the day when the hills and valleys of Socorro Island will once more be filled with the haunting coos of Socorro Doves. ●