
CAUSES OF MORTALITY OF THE PUERTO RICAN PARROT

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Abstract

The Puerto Rican parrot (*Amazona vittata*) was one of the first species listed under the U.S. Endangered Species Act and remains one of its most critical members. For over 30 yr, efforts have focused on the species life history, habitat conservation (Snyder et al., 1987; Wilson et al., 1994) and wild bird nest management. Starting in 1975, wild parrot eggs and chicks were brought in from the wild to develop a captive population. Currently there are approximately 100 parrots held in captive breeding facilities at Luquillo and Rio Abajo aviaries, Puerto Rico, under the stewardship of the U. S. Fish & Wildlife Service and the Puerto Rico Department of Natural and Environmental Resources. While significant progress has been made in habitat conservation, reproductive success has been low and/or variable among both the captive and wild populations.

As part of an ongoing effort to evaluate the captive flock health and management, an historic review of parrot mortality was undertaken. A total of 89 Puerto Rican parrot mortalities were documented in the medical records between February 1976 and March 1999. The majority of the carcasses were submitted to the National Wildlife Health Center or Southeastern Cooperative Wildlife Disease Study for post mortem evaluation. These consisted of 26 adult parrots held in captivity and 63 chicks that were wild caught or captive born.

Of the 26 adult (greater than 1 yr of age) mortalities, a definitive cause of death was determined in 58% (15) of the cases. Death secondary to trauma was the most frequent diagnosis (26%, 7). Visceral gout was diagnosed in three cases (11%); one being a parrot less than 2 yr of age with gout secondary to a nephroblastoma. Two other tumor types were noted in adult mortalities; a thyroid carcinoma was diagnosed in a 13-yr-old female, and a thymoma was an apparent incidental finding in a 5-yr-old male. Thyroid dysplasia was noted as an incidental finding in two other cases. Other miscellaneous causes of death included cardiovascular disease (2), hemorrhage (2) and peritonitis (1).

A group of 10 adult parrots have undetermined causes of death with similar histopathologic lesions within the liver or liver/kidney. This group, presented from 1988 to 1997, will be reevaluated with the knowledge that has emerged in avian medicine in the past 10 yr. Further testing of tissues and histopathologic review are planned.

Fifty-nine chick mortalities were noted from 1981 thru the 1998 breeding season. Seventy-one percent (42) of these chicks died before 30 days of age. Twenty-seven percent (16) died before 5 days of age. Twenty-two percent (13) of these cases did not have post mortem evaluations available for review. Cause of death could not be determined in 12% (7) of the cases due to the condition of the carcass.

Pneumonia was the most frequent cause of death in parrot chicks (29%, 17). Aspergillosis was the cause of mortality in 10% (6) of the 59 cases. Malnutrition/starvation/neonatal death was found in 7% (4) of the cases. Trauma was noted as the cause of death in 7% (4) of the cases. Myiasis was found to contribute to the cause of death in two chicks obtained from the wild. Scoliosis was noted in two chicks; one captive reared, the other wild born. Septicemia or omphalitis was noted in two cases.

Four fledgling (4-10 mo of age) mortalities were evaluated. The cause of death for these four cases included: visceral gout, pneumonia with pericarditis, zinc toxicosis, and a myocardial rupture.

The primary objective in this investigation was to determine if there was a pattern in mortalities that could be identified as contributing to the poor population growth. Adult parrot losses have been minimal, with an average of only four losses per year. Only two of the etiologies have exhibited five or more mortalities. As the data indicates, the only disease pattern that predominates is the high prevalence of pneumonia in the chick population. As the majority of the chick mortalities and those with pneumonia appear to be in the same age bracket (less than 30 days of age), further evaluation of the contributing factors will be pursued. In addition, continued efforts in flock management will revolve around reproductive and nutritional evaluations.

LITERATURE CITED

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