

Aliens of Xamayca

A newsletter on non-indigenous species in Jamaica

PARROT INVASION

Humans have a long history of keeping psittacines (macaws, parrots, parakeets, and their allies of the order Psittaciformes) as pets. Their bright, multi-coloured plumage, ability to mimic human speech, and their affinity to form life-long pair bonds are characteristics that have endeared them to human cultures for thousands of years. This love of keeping psittacines as companions, however, is placing Jamaica's two endemic parrots, Black-billed (*Amazona agilis*) and Yellow-billed (*Amazona collaria*) and the native Olive-throated Parakeet (*Aratinga nana*) at grave risk.

THREATS FROM INTRODUCED PARROTS IN JAMAICA

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A wide variety of psittacines have been smuggled into Jamaica. Many have escaped from their cages and survive in urban areas such as Kingston, and at least one has been documented in the first stages of becoming a pervasive and insidious invasive species: In December 2007, under the authority of the National Environment and Planning Agency (NEPA), Windsor Research Centre supervised the elimination from the wild of a non-native Yellow-naped Amazon (*A. auropalliata*), which had formed a pair-bond with a Yellow-billed.

Parrot in northern Cockpit Country. As both species belong to the same genus, *Amazona*, there was a high probability for hybridisation, with a long-term consequence that the Yellow-billed Parrot's unique genetic make-up could be compromised.

Of more pressing, short-term concern is the introduction of disease-causing pathogens and parasites into wild populations. The global movement of psittacines and other bird species in the pet trade has facilitated the spread of many diseases, as hosts with evolved immune systems shed viruses and bacteria that can be highly virulent for species which have never been exposed to these micro-organisms. Island species, particularly, are noted for their pathogen naiveté, as exemplified by the catastrophic declines of endemic Hawaiian birds from introduced declines of endemic Hawaiian birds from introduced avian malaria (*Plasmodium* spp).

In psittacines, diseases of concern include:

- -Psittacine Beak and Feather Disease- a circovirus that suppresses the immune system and can be carried asymptotically by non-indigenous species such as cockatiels, love-

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birds, and budgerigars;

- Polyomavirus that is lethal to juvenile New World psittacine species and can be carried asymptotically by cockatiels and budgerigars;
- Pachecho's and Internal Papillomatous Disease (both caused by psittacid herpesvirus); and
- Proventricular Dilatation Disease (PDD)- which is fatal and has a long occult incubation period.

PDD is a particularly devastating disease of the auto-immune system and is fatal once a bird begins showing characteristic signs of wasting and compromised central nervous system.

Despite decades of costly research, the causative agent remains unconfirmed although new evidence points to avian bornavirus as one cause. However, reliable diagnostic tests to detect infected and infectious individuals are currently limited to histopathological evaluation of relevant tissue taken by biopsy (reportedly 50% accurate) or necropsy.

In order to protect Jamaica's native and endemic avifauna from being extirpated by disease, just as the indigenous Taino succumbed to the ravages of smallpox introduced by Europeans, the temporary ban on importing birds for the pet trade, implemented in 2006 over concerns for the introduction of highly-pathogenic strains of avian influenza, should be made permanent. Owners of non-native psittacines should clip primary flight feathers following each annual moult cycle to ensure that birds escaping from their cages (e.g., during tropical storms and hurricanes) do not fly away and establish themselves in the wild.

Contributor: Dr. Susan Koenig, Windsor Research Centre;

Reference: Darrel K. Styles, DVM, PhD, Adjunct Professor Texas A&M University Schubot Exotic Bird Health Centre. The role of disease in avian ecology and conservation: Psittaciformes. Parrots International Symposium, May 31–June 1, 2008, Los Angeles,

PARROTS ON THE LOOSE

Several species of non-native Psittacines (parrots and their close relatives) have been imported into Jamaica (legally and illegally) for keeping as pets and in private collections. Several of these animals have escaped or been deliberately released into the natural environment. In 2007, measures were taken to eliminate a non-native Yellow-naped Amazon (*Amazona auropalliata*) after it formed a pair-bond with an endemic Yellow-billed Parrot (*Amazona collaria*) in northern Cockpit Country; biologists feared the pair would hybridise and create long-term consequences for the genetic makeup of the endemic yellow-billed. Since that time, other Yellow-naped Amazons have been reported in the wild in Jamaica. These are believed to be independent releases/escapes rather than evidence of an established breeding population.

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Yellow-naped Amazon has an overall green coloration with a small patch of yellow on the nape. Their eyes are orange with a gray eye ring. Beaks are mostly a black color and their feet are gray with black nails. The bird has a wing span of 20cm.

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Yellow-billed Parrot is a green parrot with white facial markings. This parrot has blue forecrown, pink throat and upper breast, and yellow bill. It is listed on International Union on Conservation of Nature (IUCN) Red List for Threatened Species as a **VULNERABLE**.

Rose-ringed Parakeets (*Psittacula krameri*), a species native to Africa and Asia, were first spotted flying over the suburbs of St. Andrew in March 2008. They are now well established in urban Jamaica and exist outside their native range in other parts of the world as well, including Australia, Great Britain and the United States of America. Impacts of invasive parrot species have included competition with native birds for food and nesting as well as consumption of agricultural crops, especially grains, nuts, and fruits. The impacts of the rose-ringed parakeets are unknown. However, there is substantial concern that they will compete with and/or may spread diseases to the native Olive-throated Parakeet (*Aratinga nana*), as well as Yellow-billed (*Amazona collaria*) and Black-billed (*Amazona agilis*) Parrots.



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Olive-throated Parakeet are green on their head, back, and tail, their throat and upper breast area are olive.

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Rose-ringed Parakeets have a green plumage. The face, abdomen and under wing-coverts are yellowish-green. The nape and the back of the head is variably washed with blue.

