

Selected Abstracts From the Literature

First captive breeding of the imperial parrot (*Amazona imperialis*). Reillo PR, Durand S, Minchinton B. *Zoo Biol.* 2011;30:3:328–341.

We describe the rearing and development of the first imperial parrot (*Amazona imperialis*) hatched and raised in captivity. A single egg was hen-incubated for 28 days, and the chick was parent-fed for ~14 days, after which it was removed for hand-rearing. Similar to wild, parent-reared imperial nestlings, the chick developed fully within 12 weeks, weaning at 540 g body weight. Endangered and endemic to Dominica, the imperial is a vital flagship for oceanic rainforest conservation. Chronicling the neonatal development of *A. imperialis* helps illuminate the natural history of this enigmatic species, whose secretive nesting habits and low population density have frustrated a detailed understanding of its ecology and reproduction.

Survival on the ark: life-history trends in captive parrots. Young AM, Hobson EA, Bingaman L, et al. *Anim Cons.* 2012;15:28–43.

Members of the order Psittaciformes (parrots and cockatoos) are among the most long lived and endangered avian species. Comprehensive data on lifespan and breeding are critical to setting conservation priorities, parameterizing population viability models, and managing captive and wild populations. To meet these needs, we analyzed 83 212 life-history records of captive birds from the International Species Information System (ISIS), and calculated lifespan and breeding parameters for 260 species of parrots (71% of extant species). Species varied widely in lifespan, with larger species generally living longer than smaller ones. The highest maximum lifespan recorded was 92 years in *Cacatua moluccensis*, but only 11 other species had a maximum lifespan over 50 years. Our data indicate that, while some captive individuals are capable of reaching extraordinary ages, median lifespans are generally shorter than widely assumed, albeit with some increase seen in birds presently held in zoos. Species that lived longer and bred later in life tended to be more threatened according to IUCN classifications. We documented several individuals of multiple species that were able

to breed for more than 2 decades, but the majority of clades examined had much shorter active reproduction periods.

Post-breeding periods were surprisingly long and in many cases surpassed the duration of active breeding. Our results demonstrate the value of the ISIS database to estimate life-history data for an at-risk taxon that is difficult to study in the wild, and provide life-history data that is crucial for predictive modeling of future species endangerment and proactively management of captive populations of parrots.

Determination of the minimum anesthetic concentration of sevoflurane in thick-billed parrots (*Rhynchopsitta pachyrhyncha*). Phair KA, Larsen S, Wack RF, et al. *Am J Vet Res.* 2012;73:9:1350–1355.

Objective—To determine the minimum anesthetic concentration (MAC) of sevoflurane in thick-billed parrots (*Rhynchopsitta pachyrhyncha*), and compare MAC obtained via mechanical and electrical stimulation.

Animals—15 healthy thick-billed parrots.

Procedures—Anesthesia was induced in each parrot by administration of sevoflurane in oxygen. An end-tidal sevoflurane concentration of 2.5% was established in the first bird. Fifteen minutes was allowed for equilibration. Then, 2 types of noxious stimulation (mechanical and electrical) were applied; stimuli were separated by 15 minutes. Responses to stimuli were graded as positive or negative. For a positive or negative response to a stimulus, the target end-tidal sevoflurane concentration of the subsequent bird was increased or decreased by 10%, respectively. The MAC was calculated as the mean end-tidal sevoflurane concentration during crossover events, defined as instances in which independent pairs of birds evaluated in succession had opposite responses. A quantal method was used to determine sevoflurane MAC. Physiologic variables and arterial blood gas values were also measured.

Results—Via quantal analysis, mean sevoflurane MAC in thick-billed parrots determined with mechanical stimulation was 2.35% (90% fiducial interval, 1.32%–2.66%), which differed significantly from the mean sevoflurane MAC determined with electri-