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LEIOCEPHALUS CARINATUS ARMOL'RI (Northern Curlytailed Lizard). CANNIBALISM.

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212), and as its distribution on Lord Howe Island is centered on human-altered areas, it probably also travelled to Lord Howe Island with cargo. *Lamprophis delicata* has the potential to impact the endemic Lord Howe Island skink, "*Cyclodina" lichenigerum*, a species that has greatly declined in the face of human occupation of the island (Cogger, op. cit.). *Lamprophis delicata* is thought to be out-competing *Lepidophyma noctua*, and possibly *Eumotia cyanura*, in Hawaii (Baker, op. cit.), although these species are smaller than *C. lichenigerum*. Elements of the endemic invertebrate fauna on Lord Howe Island (still largely undocumented) might also be at risk: *L. delicata* eats a wide range of invertebrates in Hawaii. On the Hawaiian Islands, *L. delicata* occurs in both open and vegetated habitats, as well as urban areas, and also at high altitude (Baker, op. cit.). Hence, we predict that *L. delicata* will eventually inhabit the whole of Lord Howe Island, including Mt Gower and Mt Lidgbird, which are not as high as *L. delicata* occurs in Hawaii (1220 m) (Baker, op. cit.). The invasive nature of *L. delicata* means that care should be taken to prevent its spread to adjacent islands.

We collected five vouchers and tissue samples (South Australian Museum R51734-38, plus two neonates hatched from eggs, R52444-45) for future genetic analysis to identify the source of the founder population. This work was conducted under Scientific Investigation License 2434 from the NSW National Parks and Wildlife Service and University of Sydney Animal Care and Ethic Approval L04/9-98/1/2829.

Submitted by MARK N. HUTCHINSON, Department of Herpetology, South Australian Museum, North Terrace, Adelaide, South Australia 5000, Australia; MICHAEL B. THOMPSON, School of Biological Sciences and Wildlife Research Institute (A08), University of Sydney, NSW 2006, Australia (e-mail: thombo@bio.usyd.edu.au); and JAMES R. STEWART, Department of Biological Sciences, East Tennessee State University, Johnson City, Tennessee 37614, USA.


On 6 Feb 2004, a mostly sunny day (24–25°C air temperature), CLD observed a basking adult *L. c. armouri* with a smaller lizard in its mouth in the parking lot of Tequesta Shoppes (101–191 US Hwy.) in Tequesta (25°67.6669'N, 80°05.059'W [datum: WGS84]; elev. 5 m). Upon collection of the 93 mm SVL lizard, its prey (already dead when captured) was found to be another *L. c. armouri* 55 mm SVL. Despite the observations of predation on *A. sagrei*, this is the first evidence of cannibalism in *L. carinatus*, a phenomenon that could produce ontogenetic shifts in habitat use.

Submitted by CHRISTOPHER L. DEAN, Florida Department of Environmental Protection, Florida Park Service Student Intern Program, 13798 S.E. Federal Highway, Hobe Sound, Florida, 33455, USA; RICHARD M. ENGEMAN, National Wildlife Research Center, 4101 LaPorte Ave., Fort Collins, Colorado 80521–2154, USA (e-mail: richard.m.engeman@aphis.usda.gov); HENRY T. SMITH, Florida Department of Environmental Protection, Florida Park Service, 13798 S.E. Federal Highway, Hobe Sound, Florida 33455, USA; and WALTER E. MESHAKA, JR., The State Museum of Pennsylvania, 300 North Street, Harrisburg, Pennsylvania 17120, USA.

**LIOLAEMUS PETROPHILUS** (NCN). PREDATION. Birds are often reported to feed on lizards (e.g., Terres 1991. The Audubon Society Encyclopedia of North American Birds. Wing Books, New York, New York. 1109 pp.; Trejo et al. 2003. Herpetol. Rev. 34:145), but field observations of such predation are infrequent. Hence, we report an observation of a Black-bellied Shrike-tyrant (*Agriornis montana*) preying on a *Liolaeus petrophilus* from southern Argentina.

Our observation was made during a herpetological and ornithological survey of the Somuncura Plateau, Valcheta Department, Rio Negro Province (41°07'41.4"S, 66°49'21.3"W [WGS 84], elev. 800 m) using 8 x 30 binoculars from a distance of ca. 15 m. At ca. 1600 h on 4 January 2002, CHFP observed an adult male Black-bellied Shrike-tyrant attack a subadult (ca. 120 mm total length) *L. petrophilus*. The lizard had been basking for 10 min on a large boulder at the edge of a small rocky canyon when the bird was first observed perched on the top of a small shrub at least 8 m from the lizard. After 2–3 min, the bird attacked and seized the lizard with his bill across the neck and upper thorax. After the bird secured the lizard, it flew to a rock 1–2 m away, where it pecked at the lizard and beat it against the rock. After the lizard appeared immobile, the bird laid the lizard on the rock, observed it for a few seconds before giving it several more pecks, then it seized the lizard across the first third of his body and flew off.

*Liolaeus petrophilus* is a medium-sized (~99 mm SVL) diurnal lizard inhabiting rocky outcrops in Patagonian steppe of the Rio Negro and Chubut Provinces, Argentina (Cei 1986. Museo Regionale di Scienze Naturali Torino, Monographie 4:1–528). Nothing is known about its predators. The Black-bellied Shrike-tyrant is an active diurnal predator that is commonly found in high-Andean steppes, pre-puna and mountain grassland in Argentina.

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and as its distribution on Lord Howe Island is centered on human-altered areas, it probably also travelled to Lord Howe Island with cargo. Lampropholis delicata has the potential to impact the endemic Lord Howe Island skink, “Cyclodina” lichenigerus, a species that has greatly declined in the face of human occupation of the island (Cogger, op. cit.). Lampropholis delicata is thought to be out-competing Lipinia noctua, and possibly Emotia cyanura, in Hawaii (Baker, op. cit.). although these species are smaller than C. lichenigerus. Elements of the endemic invertebrate fauna on Lord Howe Island (still largely undocumented) might also be at risk: L. delicata eats a wide range of invertebrates in Hawaii. On the Hawaiian Islands, L. delicata occurs in both open and vegetated habitats, as well as urban areas, and also at high altitude (Baker, op. cit.). Hence, we predict that L. delicata will eventually inhabit the whole of Lord Howe Island, including Mt Gower and Mt Lidgbird, which are not as high as L. delicata occurs in Hawaii (1220 m) (Baker, op. cit.). The invasive nature of L. delicata means that care should be taken to prevent its spread to adjacent islands.

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LEIOCEPHALUS CARINATUS ARMOURI (Northern Curly-tailed Lizard). CANNIBALISM. Florida is one of two states in the United States with the most severe invasive species problems (U.S. Congress, 1993. Harmful Non-indigenous Species in the United States. Office of Technology Assessment, OTA-F-565, Government Printing Office, Washington, D.C.). Leiocel~zlzcil~~s L. pcfr-oj1~i1~c., one of many species of introduced lizard in Florida, has been rapidly expanding its range (Smith et al., in press, International Biodeterioration and Biodegradation; Smith and Engeman 2003. Florida Park Service Technical Report, Hobe Sound, Florida). The few dietary studies on L. carinatus indicate that prey is almost entirely comprised of insects (Callahan 1982. Geographical and ecological distribution of the lizard Leioce~i~~zl~ele~~s L. pcfr-oj1~~~c., one of many species of introduced lizard in South Florida. MA Thesis, University of South Florida, Tampa, Florida.). Meshaka et al. (2004. The Exotic Amphibians and Reptiles of Florida. Krieger Publishing Company, Malabar, Florida. 166 pp.) likewise noted 60 lizards collected from Palm Beach County consumed mostly beetles, roaches, and ants, with 11 other invertebrate taxa also represented. However, Callahan (op. cit.) observed Northern Curly-tailed Lizards capture two exotic Anolis sagrei, and Schoener et al. (2002. Ecol. Monogr. 72:383–407) showed that experimental introductions of L. carinatus to small tropical islands had immediate major negative effects on A. sagrei population density. Here we add to range of observations of savagery in L. c. armouri with an observation of cannibalism from Florida, USA.

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