ZOO VIEW

Herpetological Review, 2021, 52(2), 448–451.
© 2021 by Society for the Study of Amphibians and Reptiles

Dedication to a Highly Productive Zoo Conservation Biologist and Herpetologist Who Serves as a Wonderful Model for all Persons in Our Profession—Allison C. Alberts, Ph.D.

I offer this tribute to Allison Alberts to reflect my admiration for her long service to our community as herpetologist, conservationist, manager, leader, and mentor (Fig. 1). Until her retirement in the fall of 2020, she served at San Diego Zoo Global as Chief Conservation and Research Officer and holds the Benirschke Chair of Research. The chair honors the name of Dr. Kurt Bernirschke, long-time veterinarian at the Zoo. Allison is responsible for ongoing conservation science activities at the San Diego Zoo, San Diego Zoo Safari Park, San Diego Zoo Institute for Conservation Research, and at field sites worldwide.

As a reptile and amphibian enthusiast, Allison has participated in conservation programs for endangered iguanas in Costa Rica, Cuba, the Turks and Caicos Islands, and Fiji, as well as working with Komodo Dragons, sea turtles, desert tortoises, and native California frogs, lizards, and snakes (Figs. 2–7). Much of her research has focused on the development of innovative techniques for restoring critically endangered species to the wild. The San Diego Zoo has been an integral player in iguana research and conservation over many years through publication of books and papers by Alberts and colleagues.

As one reviews a list of her publications, it is striking that so many are in peer-reviewed scientific journals. These topics include medical and captive management, head-starting, and *in situ* studies focusing on physiology and behavior. Another characteristic is the large number of joint studies with academic, zoo, and other biological colleagues. In summary, this is quite an impressive lifetime of accomplishments and I enthusiastically await her next thought-provoking ideas.

JAMES B. MURPHY

Division of Amphibians & Reptiles, National Museum of Natural History, 10th and Constitution Ave NW, Washington, DC 20013-7012, USA e-mail: jbmurphy222@gmail.com

Acknowledgments.—I thank Jeffrey Lemm, Conservation Program Specialist serving San Diego Zoo Global as a Conservation Program Specialist in Population Sustainability. In this role, Jeff manages the Griffin Reptile Conservation Center, a breeding center for Caribbean rock iguanas, including critically endangered Anegada Iguanas and Jamaican Iguanas; Jeff provided photographs and reviewed a draft manuscript. Judith Block provided helpful comments on a final draft.

SELECTED BIBLIOGRAPHY

Alberts, A. C. 1991. Phylogenetic and adaptive variation in lizard femoral gland secretions. Copeia 1991:69–79.

——. 1992. Pheromonal self-recognition in desert iguanas. Copeia 1992:229–232.

——. 1992. Density dependent scent gland activity in desert iguanas. Anim. Behav. 44:774–776.

——. 1992. Constraints on the design of chemical communication systems in terrestrial vertebrates. Amer. Nat. 139:S62–S89.

——. 1993. Chemical and behavioral studies of femoral gland secretions in iguanid lizards. Brain Behav. Evol. 41:255–260.

——. 1994. Dominance hierarchies in male lizards: Implications for zoo management programs. Zoo Biol. 13:479–490.

———. 1995. Use of statistical models based on radiographic measurements to predict oviposition date and clutch size in rock iguanas (*Cyclura nubila*). Zoo Biol. 14:543–553.

. 1998. IUCN West Indian Iguana Specialist Group Report. Species – Newsletter of the IUCN Species Survival Commission 30:62–63

——. 2000. West Indian Iguanas: Status Survey and Conservation Action Plan. IUCN - The World Conservation Union, Gland, Switzerland. 117 pp.

——. 2002. Ten years of conservation research on Cuban rock iguanas. Herpetol. Rev. 33:118–120.

——. 2003. Conserving the remarkable reptiles of Guantánamo Bay. *In* R. W. Henderson and R. Powell (eds.), Islands and the Sea:



Fig. 1. Allison Alberts up front and personal doing three of her favorite things—interacting with wild reptiles.



Fig. 2. Iguana Crossing sign warning motorists to slow down for lizards in Guantánamo Bay, Cuba.

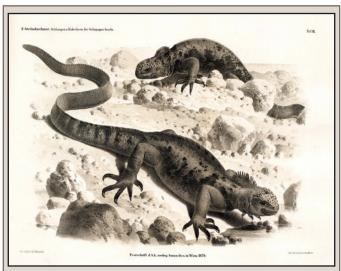


Fig. 3. Marine Iguanas (*Amblyrhynchus cristatus*) from Die schlangen und eidechsen der Galapagos-inseln / by Franz Steindachner in 1876.

Essays on Herpetological Exploration in the West Indies. Society for the Study of Amphibians and Reptiles, Ithaca, New York.

——. 2004. Conservation strategies for West Indian rock iguanas: Current efforts and future directions. Iguana 11:212–223.



Fig. 4. The Fiji Island Iguana (*Brachylophus fasciatus*), here pictured in *Proceedings of Scientific Meetings of the London Zoological Society*, is certainly impressive but it is at risk due to human factors. The San Diego Zoo is playing a significant role in developing captive assurance colonies of this taxon and congeners Fiji Crested Iguana (*B. vitiensis*) and Central Fijian Banded Iguana (*B. bulabula*).

——. 2006. Conserving the remarkable reptiles of Guantánamo Bay. Iguana 13:8–15.

2007. Behavioral considerations of headstarting as a conservation strategy for endangered Caribbean rock iguanas. Appl. Anim. Behav. Sci. 102:380–391.

T. K. Brown, T. D. Grant, J. M. Lemm, J. P. Montagne, L. G. Milroy III, and L. A. Jackintell. 2004. Conservation of the San Diego coast horned lizard on the Southwestern Riverside Multi-Species Reserve. Final Project Report to the Metropolitan Water District for Agreement No. 1550.

, R. L. CARTER, W. K. HAYES, AND E. P. MARTINS. 2004. Iguanas: Biology and Conservation. University of California Press, Berkeley, California. 341 pp.

——, AND G. P. GERBER. 2004. Turks & Caicos iguana translocation program update. Re-introduction News 23:7.

———, AND T. D. GRANT. 2003. Involving the public in endangered species recovery through volunteer field research: A test case with Cuban iguanas. Appl. Environ. Educ. Commun. 2:147–151.

——, ——, G. P. Gerber, K. E. Comer, P. J. Tolson, J. M. Lemm, and D. Boyer. 2001. Critical Reptile Species Management on the U.S. Naval Base, Guantanamo Bay, Cuba. Report to the United States Navy for Project No. 62470-00-M-5219. 101 pp.

——, J. M. Lemm, A. M. Perry, L. A. Morici, and J. A. Phillips. 2002. Temporary alteration of local social structure in a threatened population of Cuban iguanas (*Cyclura nubila*). Behav. Ecol. Sociobiol. 51:324–335.

, M. L. Oliva, M. B. Worley, S. R. Telford, Jr., P. J. Morris, D. L.

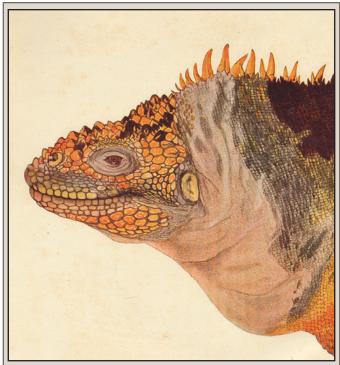


Fig. 5. Curator C. B. Perkins from San Diego Zoo moved 60 Galápagos Land Iguanas (*Conolophus subcristatus*) from Baltra Island (known also as South Seymour Island) to North Seymour Island, which contained no iguanas, in the 1940s. Had this not been done, this species would now be extinct due to human activities. Frontispage image from William Beebe's *Galapagos World's End* (1924).

Janssen. 1998. The need for pre-release health screening in animal translocations: A case study of the Cuban iguana (*Cyclura nubila*). Anim. Conserv. 1:165–172.

——, A. M. Perry, J. M. Lemm, and J. A. Phillips. 1997. Effects of incubation temperature and water potential on growth and thermoregulatory behavior of hatchling rock iguanas (*Cyclura nubila*). Copeia 1997:766–776.

, and J. A. Phillips. 2004. Experimental strategies for the recovery of depleted populations of West Indian rock iguanas. *In G. M. Malcolm and S. M. Bartol (eds.)*, Experimental Approaches to Conservation Biology, pp. 83–100. University of California Press, Berkeley, California.

——, N. C. Pratt, and J. A. Phillips. 2003. Ontogeny of captive and wild iguanas: From emergence to mating. *In* E. R. Jacobson (ed.), Biology, Husbandry, and Medicine of the Green Iguana, pp. 28–37. Krieger Publishing Company, Malabar, Florida.

——, D. C. ROSTAL, AND V. A. LANCE. 1994. Studies on the chemistry and social significance of chin gland secretions in the desert tortoise, *Gopherus agassizii*. Herpetol. Monogr. 8:116–124.

——, T. R. SHARP, D. I. WERNER, AND P. J. WELDON. 1992. Seasonal variation of lipids in the femoral gland secretions of male green iguanas (*Iguana iguana*). J. Chem. Ecol. 18:703–712.

——, AND D.I. WERNER. 1993. Chemical recognition of unfamiliar conspecifics by green iguanas: Functional significance of different signal components. Anim. Behav. 46:197–199.

CAREY, E., S. D. BUCKNER, A. C. ALBERTS, R. D. HUDSON, AND D. LEE. 2001. Protected Areas Management Strategy for Bahamian Terrestrial Vertebrates: Iguanas and Seabirds. IUCN/SSC Conservation Breeding Specialist Group, Apple Valley, Minnesota. 74 pp.

COMER SANTOS, K., C. TAGUE, A. C. ALBERTS, AND J. FRANKLIN. 2006. Sea turtle nesting habitat on the U.S. Naval Station, Guantanamo Bay, Cuba: A comparison of Habitat Suitability Index Models. Chelon. Conserv. Biol. 5:175–187.

COOPER, JR., W. E., AND A. C. ALBERTS. 1991. Tongue-flicking and biting



Fig. 6. Galápagos Land Iguana (*Conolophus subcristatus*) on exhibit at Smithsonian National Zoological Park (SNZP) in Spring 1934. The dinosaur mosaic in the transom was by artist Charles R. Knight. All of the larger exhibits within the building had background murals painted by Knight. These were detailed paintings of ancient ruins, such as Egyptian temples, as well as natural habitat scenes. Unfortunately, all of these murals were either painted over or the exhibits were totally destroyed and rebuilt during the middle 1950s and early 1960s.



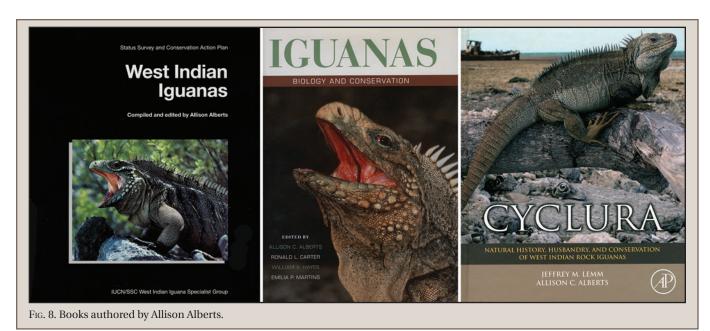
Fig. 7. Edward Drinker Cope erected the monotypic genus *Cachryx* in 1866 to accommodate his newly described species, *C. defensor* (Yucatan Spiny-tailed Iguana). However, *Cachryx* would eventually be synonymized with *Ctenosaura* or *Enyaliosaurus*. A recent molecular study (Malone et al. 2017. Mol. Phylog. Evol. 115:27–39) using both mitochondrial and nuclear data recovered the two Yucatan endemics—*defensor* and *alfredschmidti*—as outside the clade containing other species of *Ctenosaura*; both were placed in the resurrected genus *Cachryx*. Image from Proceedings of the Scientific Meetings London, 8 volumes (1861–1891).

in response to chemical food stimuli by an iguanid lizard (*Dipsosaurus dorsalis*) having sealed vomeronasal ducts: Tongue-flicking and biting in response to chemical food stimuli by an iguanid lizard (*Dipsosaurus dorsalis*) having sealed vomeronasal ducts: Vomerolfaction may mediate these behavioral responses. J. Chem. Ecol. 17:135–146.

______, AND ______. 1993. Postbite elevation in tongue-flicking rate by an iguanian lizard, *Dipsosaurus dorsalis*. J. Chem. Ecol. 19:2329–2336.

GOODMAN, R. M., C. R. KNAPP, K. A. BRADLEY, G. P. GERBER, AND A. C. ALBERTS. 2009. Radio transmitter attachment methods for West Indian rock iguanas (genus *Cyclura*). Appl. Herpetol. 6:151–170.

GRANT, T. D., AND A. C. Alberts. 2001. Phrynosoma coronatum blainvillei (San Diego coast horned lizard): Predation and telemetry. Herpetol. Rev. 32:257.



- Harlow, P. S., R. Hudson, and A. C. Alberts. 2007. Fijian Crested Iguana *Brachylophus vitiensis* Species Recovery Plan 2007–2012. IUCN SSC Iguana Specialist Group, 26 pp.
- Hudson, R. H., A. C. Alberts, S. Ellis, and O. Byers. 1995. Conservation Assessment and Management Plan for Iguanidae and Varanidae. IUCN SSC Conservation Breeding Specialist Group, Apple Valley, Minnesota. 272 pp.
- LEMM, J., AND A. C. ALBERTS. 2012. Cyclura: Natural History, Captive Maintenance and Conservation of West Indian Rock Iguanas. Elsevier/Academic Press, London, England. 221 pp.
- Lemm, J. M., and A. C. Alberts. 2000. Herps of Guantanamo Bay, Cuba: A look at the snakes, lizards and amphibians of Cuba. Reptiles 8:10–25.
- ———, M. S. Edwards, T. D. Grant, and A. C. Alberts. 2004. Comparison of growth and nutritional status of juvenile Komodo monitors (*Varanus komodoensis*) maintained on rodent or poultry-based diets. Zoo Biol. 23:239–252.
- Morris, P. J., and A. C. Alberts. 1996. Determination of sex in white-throated monitors (*Varanus albigularis*), Gila monsters (*Heloderma suspectum*), and beaded lizards (*H. horridum*) using two-dimensional ultrasound imaging. J. Zoo Wildl. Med. 27:371–377.
- ——, L. A. Jackintell, and A. C. Alberts. 1996. Predicting gender of

- subadult Komodo dragons (*Varanus komodoensis*) using two dimensional ultrasound imaging and plasma testosterone concentration. Zoo Biol. 15:341–348.
- PHILLIPS, J. A., AND A. C. ALBERTS. 1992. Naive ophiophagus lizards recognize and avoid venomous snakes using chemical cues. J. Chem. Ecol. 18:1775–1783.
- PRATT, N. C., A. C. ALBERTS, K. M. FULTON-MEDLER, AND J. A. PHILLIPS. 1992. Behavioral, physiological, and morphological components of dominance and mate attraction in male green iguanas. Zoo Biol. 11:153–163.
- J. A. PHILLIPS, A. C. ALBERTS, AND K. S. BOLDA. 1994. Functional versus physiological puberty: An analysis of sexual bimaturism in the green iguana, *Iguana iguana*. Anim. Behav. 47:1101–1114.
- ROSTAL, D. C., V. A. LANCE, J. GRUMBLES, AND A. C. ALBERTS. 1994. Seasonal reproductive cycle of the desert tortoise (*Gopherus agassizii*) in the eastern Mojave Desert. Herpetol. Monogr. 8:72–82.
- WEICH, M. E., G. COLOSIMO, S. A. PASACHNIK, C. L. MALONE, J. HILTON, J. LONG, A. G. GETZ, A. C. ALBERTS, AND G. P. GERBER. 2017. Molecular variation and population structure in critically endangered Turks and Caicos rock iguanas: Identifying intraspecific conservation units and revising subspecific taxonomy. Conserv. Gen. DOI: 10.1007/s10592-016-0922-6.