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stewart
12-10-65

FOR RELEASE AFTER THE SPEECH

The iguana is having its day at the University of Montana in Missoula where its rather unorthodox method of secreting salts is under study.

Dr. James R. Templeton, associate professor of zoology at the UM, told the American Association for the Advancement of Science delegates in Berkeley today how iguanas excrete excess body salt in his talk on "Acclimation to sodium loading by the lizard nasal salt gland."

Unlike mammals, which secrete salt through the kidney into their urine, iguanas can also secrete salt through their nostrils from unique glands situated near each nasal passage, Dr. Templeton said.

He has found the fluid from these bilateral nasal glands to be extremely rich in the salts of potassium and sodium. In fact, he reports, this fluid contains more potassium than any body fluid for any other animal so far measured.

By the time the fluid has reached the nostrils of the lizard it usually has evaporated, leaving the dried salt to encrust around the nostrils and to flake off eventually. This ability to remove salt in such a concentrated fluid is invaluable to a desert dweller like a lizard, which must conserve precious water, but still must secrete salts, he explained.

When either the herbivorous desert iguana, a lizard from our Californian and Arizonan deserts, or the black iguana from Mexico is injected with sodium chloride--table salt--the secretion becomes richer in sodium. But if another iguana, the insectivorous blue spiny lizard is similarly injected, no enrichment of the nasal secretion with sodium occurs.

(more)

If all three species are injected with potassium chloride, the nasal salt gland immediately increases the amount of potassium in the fluid. Dr. Templeton suggested that probably the blue spiny lizard rarely ingests fluctuating quantities of sodium in its diet of insects, spiders, and other arthropods, but the herbivorous species may encounter fluctuations of sodium in the plants they eat, therefore their nasal salt glands adjust accordingly.

Other lizards do not have a functional nasal salt gland and must excrete salts by the way of the urine, the zoologist said. He is now making a comparative study of the roles that this gland and the kidney play in salt and water excretion in the large black iguana of Mexico, which possesses the salt gland, and in the equally large South American tegu lizard, which does not have such a gland.

They will have course work in vocational development, counseling theory and supervised counseling practices. Credit received from the institute will be applicable to programs in counselor education at the graduate level.

Dr. Stoner added that the institute was to be conducted by UM faculty members, but will also feature nationally prominent guest lecturers to speak on various important phases of counselor education.