

SEMINAR NEWS

On Tuesday, October 19th at 12 noon in the Ancon Conference Room, GILBERTO OCAÑA, STRI will speak during the first half hour on:

"Alternatives to Destruction: STRI and development of the rural sector in Panama"

During the second half hour, RICHARD PRETTO, Director of the Department of Aquaculture, Of the Ministry of Agricultural Development of Panama, will speak on:

"An Integrated Aquaculture Program: a Case Example from MIDA-PANAMA"

ARRIVALS AND DEPARTURES

STEVE MULKEY, University of Pennsylvania, is expected to arrive this week to continue working with A. SMITH on the study of understory herbs at BCI.

October 22 - Leaving, CAROL JOPLING on official business to the Smithsonian in Washington, D.C. She will be away for one week.

LIBRARY NEWSNew Books:

- Classification and Ordination, Symposium on Advances in Vegetation Science
- The Hunters and the Hunted (C.K. Brain).
- Natural Selection and Social Behavior (R. Alexander and D. W. Tinkle).
- Physiological Ecology (C.R. Townsend and P. Calow).
- Worldwide Furbearer Conference Proceedings

STAFF TRAVEL

MARY JANE WEST-EBERHARD returned recently from Barcelona, Spain, where she gave the Inaugural Lecture for the annual meeting of the French-language section of the International Union for the Study of Social Insects held September 16-18. This was in fact an International Colloquium, attended by biologists from France, Spain, Switzerland, Belgium, Holland, Germany, England and Italy. The French section is the oldest and most active regional section of the IUSSI, and sponsors the organization's journal INSECTES SOCIAUX. Dr. West-Eberhard was the first woman, the first American (North, South or Central) and the first specialist in social wasps ever invited to give the inaugural address, which is always given by an invited speaker from outside the French section. The theme of the meeting was "Communication" and Dr. West-Eberhard spoke on: "Communication in social wasps: predicted and observed patterns". Following the meeting, she was invited to the Station Biologique of the Universite Pierre et Marie Curie in Les Eyzies, France. Her hosts were Roger and Bernadette Darchen, who have done much work on tropical ants, wasps, stingless bees and social spiders in Africa (Gabon) and America (Mexico). To conclude the account of her trip she writes: "Near Barcelona I had the fun of observing the behavior of *Polistes gallicus*, the subject of many 'classic' studies of wasp behavior and natural history."

A GET WELL WISH: to TERESA TOWNSHEND, who was recently hospitalized at the Centro Medico Paitilla.

SEMINAR NOTES D. Roubik

What is the basis of female choice in breeding land iguanas of the Galapagos? DR. DAGMAR WERNER discussed the question using data collected on Fernandina Island in 1978 and 1979. During the breeding season, male iguanas weighing up to 8 kg. fight intensively for possession of territories to which females come to mate, feed and lay their eggs in burrows. A male can lose 30% of its body weight during such competition. A good territory proved to be one having loose soil for burrow construction and adequate vegetation for feeding, not more than 40 m from the burrow. Females show the males whether they are ready to mate by combination of coloration (unreceptive females are darker) and posture (nodding of the head while facing upward means "no"). Nonetheless, females can be raped and retreat to the burrow to prevent this.

By measuring 10 potentially important parameters of male territories, then scoring mating success of males from the number of females emerging from their burrows in early morning, Dr. Werner tested whether females chose males on the basis of their territory quality. In the first year of the study, females were choosy about the territory occupied by males. But territory quality alone did not determine the mating success of individual males. In fact, during the second year of the study, females came to male territories and deposited fertilized eggs in burrows without mating. Sperms stored from the previous matings fertilized the eggs, and sperm storage by other reptiles, plus the up to 20 year lifespan of land iguanas, do not preclude the possibility that reproduction without mating on a given year is a normal aspect of their mating biology. Females did not lay their eggs outside male territories even when no mating was taking place, which may indicate that the presence of males or a unique feature of their burrows are necessary to induce female egg laying. In addition, males on the second year were roughly 1/2 as active in displaying to females and fighting as on the first, and this behavioral difference may provide the key to explaining the change in female receptiveness. The females appear to choose males both on territory quality and on the basis of male behavior. Plausibly, if the male hasn't been successful in procuring food for itself, to endure the rigors of sexual competition, the female may opt to use a territory of a male but the sperm of more vigorous males from past years.

IMPORTANT WARNING

There is presently in the Canal area a small epidemic of Leptospirosis, which is acquired by wading in freshwater streams. As much as possible, wading and snorkling in freshwater streams should be avoided during the next 6 weeks.