

females. Juvenile home range size was similar to that of adult females. Information on temporal variability of home ranges and the relation of home range size to vegetational cover and population density are presented.

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JUSTIS, C. SUE, and DOUGLAS H. TAYLOR (Miami University of Ohio). Extraocular photoreception and compass orientation in larval bullfrogs, Rana catesbeiana.

Eyeless larval bullfrogs (Rana catesbeiana) possess extraocular photoreceptors (EOP's) for perception of celestial cues for spatial orientation. It appears that the pineal gland (epiphysis cerebri) and the frontal organ (stirnorgan) are the effective EOP's utilized in this response. Additionally, both of these EOP's are capable of perceiving photo-period changes for purposes of biological clock synchronization.

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McDIARMID, ROY W., W. RONALD HEYER, and DIANA L. WEIGMANN (University of South Florida, National Museum of Natural History and University of Kansas). Tadpoles, predation and pond size in the Tropics.

Tadpoles involved in predator-prey interactions were studied under laboratory and field conditions in tropical wet forest in Costa Rica. Larvae of Leptodactylus pentadactylus and naiads of the odonate Pantala flavescens are important predators on larvae of several species of frogs. Feeding experiments elucidated the nature of the predator-prey interactions. Interestingly, both predators and prey are inhabitants of small ephemeral puddles. A model is used to illustrate the relationships between predation and pond size as they affect the composition of the tadpole community. The predatory feeding mode of tadpoles is considered in light of this model.

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MILLER, KIRK, and GARY C. PACKARD (Colorado State University). Altitudinal variation in critical thermal maximum of chorus frogs (Pseudacris triseriata).

Critical thermal maxima (CTMs) were determined for chorus frogs collected along an altitudinal gradient running from the piedmont of northcentral Colorado to high parklands in the Front Range of the Rocky Mountains. There is an inverse, linear correlation between CTM of chorus frogs and altitude. Since montane habitats are characterized by generally cooler conditions than are piedmont and intermediate localities, the reduction in CTM of chorus frogs with increasing elevation presumably represents an outcome of physiological adaptation by the frogs to their respective thermal environments. A relatively low CTM may indicate that rate-limiting enzymes in intermediary metabolism function optimally at relatively low body temperatures.

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REDMOND, WILLIAM H., and ROBERT H. MOUNT (Auburn University). Amphibians and Reptiles of coastal plain affinity found within the Coosa Valley, Appalachian Ridge and Valley Province, Alabama.

Within the Appalachian Ridge and Valley province, the Coosa Valley stretches from northeastern to central Alabama. It is approximately 125 miles long and varies from 5 to 30 miles wide. Nine species of amphibians and reptiles which are usually associated with the Coastal Plain have been reported to occur within the Coosa Valley. The zoogeographical significance of the presence of these 9 species will be discussed and interpreted in terms of present ecological conditions and past geological events.