

A101**A Revision of the Genera *Euophrys*,
Pseudeuophrys and *Talavera* (Araneae:
Salticidae) from Korea****Byung-Woo Kim* and Joo-Pil Kim**Dept. of Biology, Dongguk University, Seoul
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Salticid spiders of three genera, *Euophrys* C.L. Koch, 1834, *Pseudeuophrys* Dahl, 1912 and *Talavera* Peckham et Peckham, 1909 are revised. Up to now four species, *E. erratica* (Walckenaer, 1802), *E. frontalis* (Walckenaer, 1802), *E. trivittata* Schenkel, 1963 and *E. undulatovittata* Boesenberg et Strand, 1906 were reported in Korea (Kim, 1998). But *E. erratica* and *E. undulatovittata* reported in Korea is the synonyms of *Pseudeuophrys iwatensis* (Bohdanowicz et Proszynski, 1987) and *Pseudicius vulpes* (Grube, 1861) respectively. One species of the genus *Talavera*, *T. trivittata* (Shenkel, 1963) and only one species of *Pseudeuophrys*, *P. iwatensis* were recognized. These genera, *Talavera*, *Pseudeuophrys* are new to Korean spider fauna. All the species are redescribed and illustrated.

A102**Testing the Function of the
Conspicuous First Dorsal Fin on
Stream Gobies****Ho Young Suk* and Jae Chun Choe**School of Biological Sciences, Seoul National
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The question of how animals choose their mates has long been of interest to behavioral ecologists. Previous studies of fish with paternal care have demonstrated the importance of male body size and nest site characteristics. Here we show results from experiments carried out on a freshwater fish, *Rhinogobius* sp. OR (stream goby; family

Gobiidae) which exhibits paternal care. Males of stream gobies have the first dorsal fin (FDF) that is markedly longer and more elaborate in color and shape than females. Our findings show that, in contrast to the common view, females based their mate choice decision on the length of the FDF of males, but mated randomly with respect to male body size and nest size. The strength of preference for the longer FDF increased with inter-male difference in the FDF length. Males with longer FDFs had no advantage in male-male competition, while the outcomes of male fight were determined largely by body size. Our tests suggest that female choice and mate competition may affect the evolution of different male morphological traits in this species. An interesting question remains, however: what benefits should accrue to females when choosing her mates with longer FDF?

A103**Age at First Reproduction in the
Cheju Pony (*Equus caballus*): Costs
and Benefits of Early Reproduction****Jeong Rae Rho* and Jae Chun Choe**School of Biological Sciences, Seoul National
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Age at first reproduction varies among or even within the species. We examined relationship between age at first reproduction and reproductive cost in Cheju ponies (*Equus caballus*) on Cheju island, Korea. Of 770 foals produced from 1987 to 2000, 49 were produced at first reproduction. The proportion of foals produced by mares of 2-5 years old mares is 8.2% (n=4), 38.8% (n=19), 36.7% (n=18), and 16.3% (n=8) respectively. There was a significant relationship between reproductive cost and age at first reproduction. The foals produced by mares in early reproduction were harassed more than the foals produced by mares in late reproduction. Mares that

reproduced foals in early reproduction invested more time and effort in guarding their foals than equivalent mares whose first reproduction was in late reproduction. Our results suggest that mares in early reproduction will enhance their lifetime reproductive success although costs of early reproduction would be substantial.

A104

Morphological Differences between Males and Females of Korean Wood-eating Cockroaches, *Cryptocercus* sp.

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We describe morphological characters that would allow rapid and non-destructive determination of gender in Korean woodroaches. Examination of female woodroaches revealed apicolateral emargination of the subgenital plate and subtruncate apical median prominence in adults, and a narrowly rounded apical median prominence in nymphs. On the contrary, males show no such emargination, and instead have rounded broad apical median on this area. The presence or absence of an apicolateral emargination of the subgenital plate provides a particularly excellent diagnostic character for gender determination in Korean woodroaches.

A105

Colony Composition in Relation to Parental Care in Korean Wood-eating Cockroaches, *Cryptocercus* sp.

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Populations of wood-eating cockroaches were discovered in rotting logs from various mountainous regions in Korea. They live in monogamous associations in which parents care for their young for an extended period. Mean brood size was 21.5 (N=163 broods, SD=9.2). The number of nymphs dropped significantly between one and two year of age, whereas there was no significant decrease in brood size between two and three year of age. In family groups with young nymphs of one to three years old, the brood size was significantly greater in broods with parent than in broods without parents. However, the presence of one or both of parents did not correlate with brood size in family groups with four year-old nymphs. These results suggest that parental presence is more important for survival in younger nymphs than in older nymphs.

A106

Breeding Biology of Black-billed Magpies in Korea (*Pica pica sericea*)

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We have investigated the general breeding ecology of black-billed magpies (*Pica pica sericea*) on the campus of Seoul National University since 1998. Three aspects were considered here: (i) breeding success, (ii) territoriality, and (iii) offspring sex ratio. Breeding successes of 1998, 1999 and 2000 were 2.8, 3.2, and 2.5 fledglings/successful nest respectively. Breeding success appeared to be influenced by the temperature during incubation and/or the number of rainy days during fledging. Causes of breeding failure differed among the three years; hatching failure was the main cause in 1999 and 2000 while nest desertion was the one in 1998. Territory size and distribution did not differ