

have colonized this wetland site. This finding has promising implications for the management and conservation of this highly threatened species.

Regional variation of subdigital setae and seta-like outgrowths on digit IV of the tokay gecko (*Gekko gecko*)

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Gecko setae interact with locomotor surfaces through van der Waals forces to produce an adhesive bond (Autumn *et al.*, 2002). There is a direct relationship between setal geometry and force generation. Setal characteristics such as spatula diameter and number of tips apparently dictate adhesive capabilities. Estimates of maximal adhesive force have assumed that setae are identical throughout subdigital pads. There has been no examination of setal variation throughout the subdigital region of any gecko species, even though some aspects of interspecific variation are well documented. Here we investigate the form and distribution of subdigital Oberhäutchen elaborations throughout pedal digit IV of the tokay gecko (*Gekko gecko*) as an exemplar of structural variation in this taxon. This digit is subdivided into three zones according to morphology and function: the distal region encompassing scansors associated with the penultimate phalanx; the intermediate region that includes lamellae associated with the short intermediate phalanges; and the basal region including lamellae underlying the proximal phalanx. Differences in distribution, length of epidermal outgrowths, basal diameter and tip diameter are reported for each zone of the digit and are related to the gross morphology of the digit. Setal length decreases from distal to proximal along the length of the digit, as does basal diameter. For each individual lamella or scansor, setal length also decreases from distal to proximal, but branching pattern appears to remain constant. The distribution of elaborations, shape and dimensions of setal tips from the distal region of the digit differ greatly from those of elaborations on more proximal zones. We relate form and distribution of elaborations to their function in relation to the locomotor kinematics of *Gekko gecko*, and to the evolution of van der Waals-type interaction of setae from less elaborate structures.

Courtship behaviour at low and high water temperatures in the Alpine newt

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Environmental factors are known to have a major effect on behavioral patterns of organisms. Among these factors, temperature particularly affects ectotherms.

However, although many studies focused on acoustic communication, the effect of environmental temperature on visual courtship displays and sexual performance has been little explored. The aim of this work was to determine the effect of temperature on the sexual behaviour of the Alpine newt *Triturus alpestris* in controlled laboratory conditions. Temperature had a major effect on the two sexes: at low temperatures, the frequencies of several displays, including sperm deposition, is lowered. This variation is in fact caused by the female responsiveness, which is temperature-dependent. However, some other behaviours, such as the fanning movement of the male's tail (i.e., the main courtship display) are directly dependent on temperature: at lower temperatures, the tail beats at a lower rate but for a longer time. The similar reproductive success at the two temperatures indicates that breeding in cold water is not necessarily costly. It allows males and females to mate early in the season. This is particularly adaptive because, in many habitats, the reproductive period is shortened by drying or freezing conditions which may impair survival of branchiate offspring.

Feeding and reproductive ecology of the common chameleon *Chamaeleo chamaeleon* (Linnaeus, 1758) and the African chameleon *Chamaeleo africanus* Laurenti, 1768 from Greece

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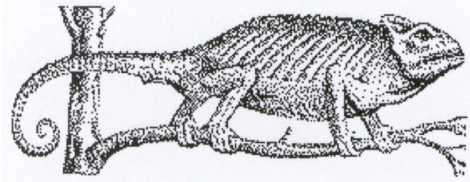
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In Greece there are two chameleon species, the Common Chameleon *Chamaeleo chamaeleon* (Linnaeus, 1758) and the African Chameleon *Chamaeleo africanus* Laurenti, 1768. The Common Chameleon has the broadest distribution of all chameleon species. The distribution of this species in Greece includes the Aegean islands of Samos, Chios, and Crete. The African Chameleon in Greece (and Europe) is found only at a locality near Pylos, W.Peloponnese. The results of the food and reproductive analysis of the Common Chameleon and the African Chameleon are presented. A comparison of the different species and sexes is also included. This is the first time that information on the diet of Greek specimens of the Common Chameleon and the reproduction of both species is presented. Most of the animals used in this study had been found killed by cars. The two chameleon species studied are euryphagous and feed mainly on insects. The diet tends to differentiate between both the two species and the sexes of the two species. The mean and range of



**FIFTH
WORLD CONGRESS
OF
HERPETOLOGY**

STELLENBOSCH

June 2005

ABSTRACTS AND PROGRAMME

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**Tuesday 21 June 17:30 at Jannasch
Hall, Conservatory of Music,
Stellenbosch University**

1. Opening of the meeting
2. Minutes of the last meeting
3. Report of the Secretary-General
4. Report of the Secretary-Elect: Next venue for the World Congress of Herpetology
5. Report of the Treasurer
6. Report of the Auditors
7. Report of the Congress Director
8. Elections:
 - 8.1 Executive Committee
 - 8.2 International Herpetological Committee
9. Future role of the International Herpetological Committee
10. Any other business

Note: All congress participants have the right to take part and vote in the meeting. A list of eligible candidates for the Committees will be distributed with this programme. Additional items for the agenda can be presented to the Secretary General until 24 hours before the business meeting.