

Preliminary results on feeding ecology of the African Chameleon *Chamaeleo africanus* Laurenti, 1768 from the southwestern Peloponnese, Greece

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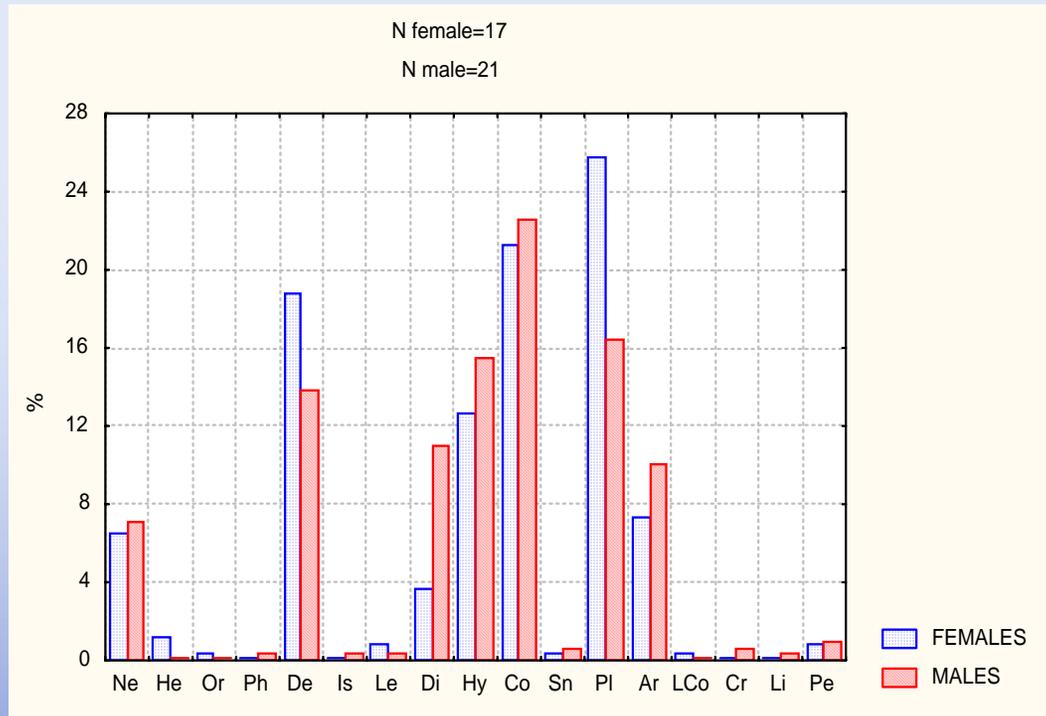
Introduction

- Data on the feeding ecology of the African Chameleon *Chamaeleo africanus* Laurenti, 1768 are presented from Greece. This is a new species for the Greek herpetofauna (Böhme *et al.*, 1998).
- The distribution of the African Chameleon ranges from the Red Sea to western Mali (Central Africa) (Böhme, 1985). To the north it has reached Egypt (Joger, 1981). The species has been recorded from Ramleh, close to Alexandria (Anderson, 1898).
- In Greece this species has been observed only at Divari lagoon, Gialova near Pylos, in the southwestern Peloponnese (21° 40'E, 36° 58'N). It has a limited range of about 20 ha.
- The study area of the African Chameleon is a coastal area with sea inlets. The habitat in which this species has been observed consists of salt marshes, sand dunes, agricultural land, maquis and phrygana formations and some reeds.
- Information on the diet of this species is completely lacking. A comparison was made between the chameleon species from literature.
- A comparison was made between the feeding ecology of the two sexes of the African Chameleon and between summer and autumn.

Materials and Methods

- For the present study, the stomach contents of 36 specimens and faecal analysis of 7 specimens (21 males and 17 females) were examined. The examined animals were found killed (most of them by cars) during the period 1996-1999, twenty-five of them in the summer and 16 in autumn, during the months June-November.
- The stomach and faecal contents of each specimen were counted and examined under a dissecting microscope provided with a micrometer scale in the objective lens. We identified prey items and recognizable body parts to order level. Each lizards' sex was recorded.
- Diet was summarized in two ways: proportion of the total number of prey items in the stomachs (%N) and proportion of lizards eating a certain prey taxon (F). Niche breadth (H') was calculated using Shannon-Wiener index: $H' = -\sum p_j \log p_j$
- Levins index: $B = 1/\sum p_i^2$
- Descriptive statistics were used for the analysis.

Prey composition of the two sexes in the examined seasons



The diet of the African Chameleon tends to differ between the two sexes. Plant remains and remains of Hemiptera are more commonly found in stomachs of female specimens while the male's stomachs contained more Coleoptera and Diptera remains. There is no significant difference between the number of prey items of the two sexes.

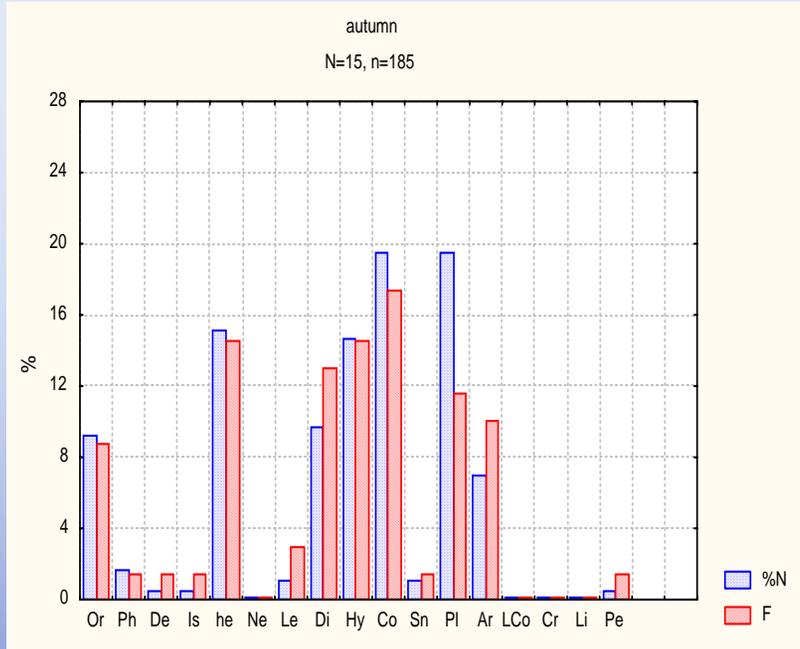
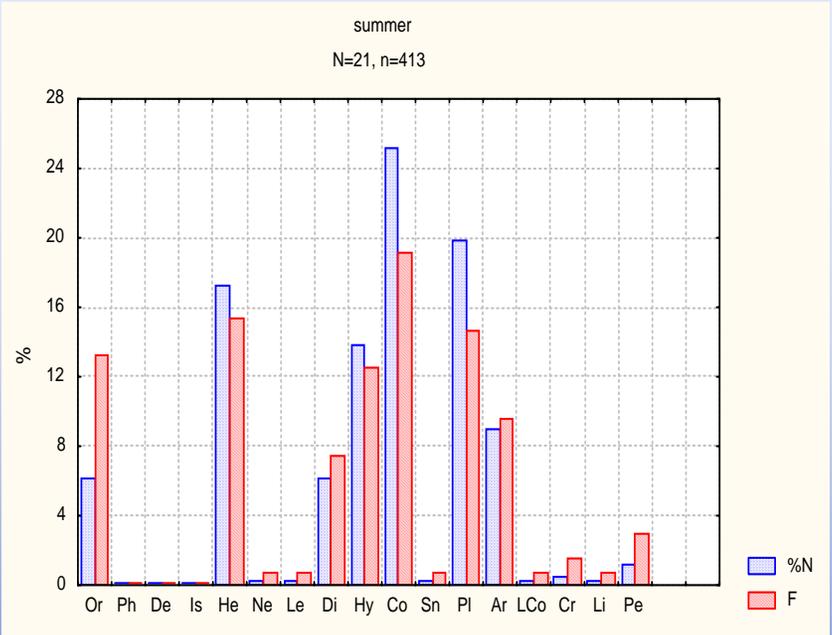
The most important food taken by males was Coleoptera (22.6%) followed by plant remains (16.5%) and Hymenoptera (15.5%). The most important prey taxa for females were plant remains (25.7%), Coleoptera (21.2%) and Hemiptera (18.8%).

Category of food present in stomachs of *Chamaeleo africanus*

Food category	Total number of prey items found	Number of stomach in which item occurred	Percentages of occurrence
Orthoptera	42	24	11,3
Phasmida	3	1	0,5
Dermaptera	1	1	0,5
Isoptera	1	1	0,5
Hemiptera	101	33	15,5
Neuroptera	1	1	0,5
Lepidoptera	3	3	1,4
Diptera	43	19	8,9
Hymenoptera	87	28	13,1
Coleoptera	147	40	18,8
Snail	3	2	0,9
Plant remains	119	29	13,6
Araneae	51	21	9,9
Larvae (Coleoptera)	1	1	0,5
Crab	2	2	0,9
Lizard's slough	1	1	0,5
Pebbles	7	6	2,8

- The most frequently encountered prey were Coleoptera, Hemiptera, plant remains and Hymenoptera, (number of examined specimens N=43).

Proportion of prey in the examined stomachs (%N) and proportion of specimens having eaten the same prey type (F)

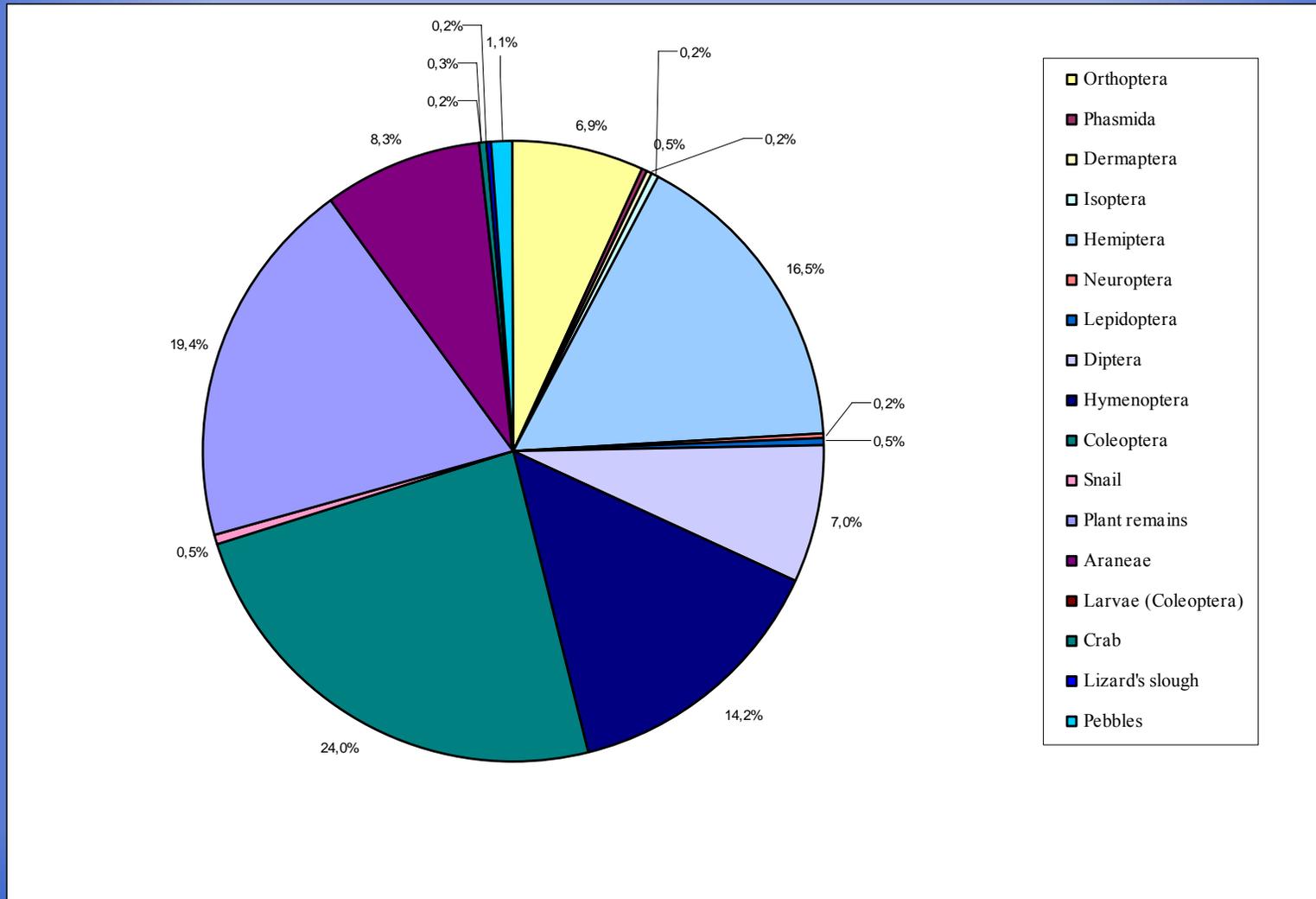


- Or Orthoptera
- Ph Phasmida
- De Dermaptera
- Is Isoptera
- He Hemiptera
- Ne Neuroptera
- Le Lepidoptera
- Di Diptera
- Hy Hymenoptera

- Co Coleoptera
- Sn Snail
- Pl Plant remains
- Ar Araneae
- lco larvae (Coleoptera)
- Cr Crab
- Li Lizard's slough
- Pe pebbles

N: number of examined specimens
n: number of prey items

Stomach and faecal contents of *Chamaeleo africanus*



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