

## Fragmenta Theriologica

### First Record of a Live *Crocidura* (Mammalia, Insectivora) from Pantelleria Island, Italy

PIERWSZE STWIĘDZENIE ZĘBIEŁKA Z WYSPY PANTELLERIA (WŁOCHY)

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Contoli L. & Amori G., 1986: First record of a live *Crocidura* (Mammalia, Insectivora) from Pantelleria Island, Italy. *Acta theriol.*, 31, 26: 343—347 [With 1 Table & 2 Figs.]

A first trapped specimen record of genus *Crocidura* for Pantelleria island is reported. The distribution of representatives of this genus in the middle Mediterranean area is also discussed.

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During a survey of small mammals on Pantelleria Island, Trapani, Italy, a *Crocidura* specimen was trapped with a Longworth device. This represents the first record of the genus of the current fauna of the island.

Pantelleria is an 83 km<sup>2</sup> volcanic island located in the Sicily channel, approximately equidistant between the Sicilian and North-African coasts. The island supports a diverse mosaic of habitats, which include Mediterranean woodland and maquis, vineyards, scattered or sparse shrub or grass vegetation, market gardens and uncultivated areas.

The specimen was captured on 9 August 1984 (by Amori & Cristaldi) in low shrubland under an *Opuntia ficus-indica* plant. The locality named "casa Valenza", with an altitude of 116 m a.s.l. is located 1 km SW of the village of Scauri, 1 km from the coast. In the same habitat and locality also *Mus domesticus* was captured.

The specimen is a female, aged IV according to Vesmanis & Vesmanis (1979b). It is presently stored at the Department of Animal and Human Biology of the University "La Sapienza" of Rome. The teeth terminology that we adopted is according to Vesmanis (1976b).

The body, skull and tooth morphology enables a sure attribution of the specimen caught to the genus *Crocidura* Wagler, 1832.

In the West-Mediterranean region that includes Pantelleria there are up to now known and well characterized: *Crocidura leucodon* (Hermann, 1780), *Crocidura russula* (Hermann 1780) and *Crocidura suaveolens* (Pallas, 1811). Moreover, *Crocidura sicula* (Miller, 1901) is known only with two specimens from Sicily (Vesmanis, 1976a; Vesmanis *et al.*,

1979; Corbet & Hill, 1980), but not all authors accept this statement (Toschi & Lanza, 1959; van den Brink, 1969; Richter, 1970; Corbet, 1978; Honacki *et al.*, 1982).

The Pantelleria specimen shows the following characters: the zygomatic processes are divergent in caudal direction and their proximal ends seems to correspond with the  $3/4$  of the  $M^2$  length in caudal direction (Richter, 1963) (see Fig. 1), different from *C. leucodon*. The fo-



Fig. 1. Skull (*norma lateralis*) of *Crocidura* specimen of Pantelleria. (Photo L. Veroli).



Fig. 2. Skull (*norma ventralis*,  $P^4$ ) of *Crocidura* specimen of Pantelleria. (Photo A. Rossi).

ramina of basisphenoid are quite large and well evident according to the criteria of Catalan & Poitevin (1981), different from *C. suaveolens*. The protoconus of  $P^4$  is in fully medial position and the groove between protoconus and hypoconus is in direction of  $P^4$  metastyle, not in parallel direction with medial border of  $P^4$  (Richter, 1970; Vesmanis & Vesmanis, 1979b, "A" type) (Fig. 2), such character is constantly present in *C. russula*. Relevant level of upper monocuspids and of the parastylus of  $P^4$  is related to "russula" model according to several authors, from Miller (1912) to, *e.g.*, Catalan & Poitevin (1981). Another character typical of *C. russula* with respect to *C. leucodon* is that in the mandible the *processus angularis* is lacking of terminal hook and diagonal ridge (Richter, 1964).

The skull is quite large especially in length (Table 1). Morphometrical

characters, lie all in the plus variant range of the two larger species present in Italy, *C. leucodon* or in the West Mediterranean islands, *C. russula*. Moreover in some cases even (condylobasal length and coronoid height) over or at the end of the variability as reported (Vesmanis, 1976a; Vesmanis *et al.* 1980).

All such characters suggest us that the Pantelleria specimen could be identified as *C. russula* (Herman, 1780).

The distribution of members of the genus *Crocidura* in the middle Mediterranean region was recently reviewed by Vesmanis & Vesmanis (1981). *C. russula* is present in the North-Africa and Provence coasts,

Table 1

Skull measurements (mm) of *Pantelleria* specimen in the relation to the ranges of the "large" *Crocidura* species known for the study area (data from: Vesmanis, 1975; Saint Girons, 1973; Contoli, 1977; Vesmanis & Vesmanis, 1979a; Catalan & Poitevin, 1981).

	<i>C. russula</i>			<i>C. leucodon</i>		<i>C. cf. russula</i> of Pantelleria
	Sicily	Sardinia	Europe	Italy	Europe	
Condylobasal length	18.1—19.7	18.0—19.7	17.8—22.0	18.8—19.6	18.1—21.0	20.71
Breadth of brain case	8.6—9.2	8.6—9.5	8.3—9.7		9.3—9.7	9.50
Zygomatic breadth	5.8—6.6	5.8—6.5	5.4—7.3	6.1—6.9	6.1—7.0	6.43
Rostrum length	2.5—2.9	2.4—2.9	2.5—3.1	2.4—2.6	2.2—2.9	2.80
Coronoid height	4.4—5.0	4.5—5.2	4.4—5.3		4.5—5.3	5.41
Basisphenoid foramen breadth			0.5			0.3—0.4

Sardinia, Sicily, Galita island and perhaps Gozo. However it has not been reported from mainland Italy during the last 20 years (Witte, 1964; Toschi, 1965; Meylan & Hausser, 1974; Contoli, 1981a, b). *C. suaevolens* is present in Provence, mainland Italy, Corsica and some small island such Elba, Capraia, Egadi, Malta and Gozo. *C. leucodon* is present throughout peninsular Italy (Witte, 1964; von Lehmann, 1977; Contoli, 1981a, b) but is not at present known from any island.

Previously, Felton & Storch (1970) found on Pantelleria subfossil material of *Crocidura*, possibly referable to *C. russula*. They moreover suggested that possibly *Crocidura* is part of the recent fauna of Pantelleria island. The presence of *C. russula* on Pantelleria would be consistent with its overall general distribution in the western Mediterranean region, as noted by Richter (1970).

Quite interesting are dimensional data. The large size of the specimen

may be characteristic of small mammals on Pantellaria, in as much as Felten & Storch (1970) have reported above average-sized *Apodemus sylvaticus hermani* from the island, as, at least on the other islands in the same region, possibly related to genetic or ecological factors.

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## Fecal Crude Protein Relative to Browsing Intensity by White-Tailed Deer on Wintering Areas in Maine

ZAWARTOSC BIAŁKA W KALE JELENIA WIIRGIŃSKIEGO, ODOCOILEUS VIRGINIANUS  
A INTENSYWNOSC ŻEROWANIA ZIMĄ W MAINE

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Hodgman T. P. & Bowyer R. T. 1986: Fecal crude protein relative to browsing intensity by White-tailed deer in wintering areas in Maine. *Acta theriol.*, 31, 26: 347—353 [With 3 Tables]

The efficacy of using fecal crude protein (FCP) from white-tailed deer (*Odocoileus virginianus*) to rank the quality of five wintering areas in central Maine, U.S.A. was tested by comparisons with browsing intensity on northern white cedar (*Thuja occidentalis*). FCP averaged 7.6% on low quality areas, 8.8% on areas of moderate quality, and 10.4% on high quality ranges. Measures of browsing intensity including stem diameter at point of browsing, leader lengths of new growth, and percent of new growth removed did not differ significantly with rankings obtained from FCP. FCP provided a time and cost-efficient method of ranking the nutritional status of free-ranging deer on winter ranges.

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### 1. INTRODUCTION

Browse surveys of white-tailed deer (*Odocoileus virginianus*) winter range traditionally have been used to appraise habitat quality (Aldous, 1944; Bramble & Goddard, 1953; Dickinson, 1978; Hout, 1974; Moore

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