CURRENT STATUS OF MYOXIDS (MAMMALIA: RODENTIA) IN CALABRIA (SOUTHERN ITALY)

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ABSTRACT – Four species of Myoxids are presently known to live in the southern region of the Italian peninsula: *Eliomys quercinus, Dryomys nitedula, Myoxus glis, Muscardinus avellanarius.* The only paleontological evidence, dating from the Wiirm period, refers to *E. quercinus, M. avellanarius* and *M. glis*, which were found in caves of the Northern Thyrrenian Coast. The historical data concerning the Calabrian Myoxids, do not include the presence of *Dryomys nitedula* which was recorded for the first time in the Aspromonte Massif only in 1964 (von Lehmann, 1964). The actual geographical distribution of *D. nitedula* in Southern Italy seems to include the Calabrian and Basilicata mountains. The ecological distribution of *D. nitedula* seems to be tied to the presence of beech woods from 1300 m to 1800 m above sea level. Present knowledge concerning Calabrian Glirids is very scanty and fragmentary since no specific studies have been carried out. Most available data refer to *Muscardinus avellanarius*, a species frequently found in bird of prey pellets (mainly from *Tyto alba*) from sea level to 1300 m a.s.l., both in the sclerophyll and in the decidous biomes. By contrast, few data dealing with *Eliomys quercinus* exist probably due to a fragmented distribution within this region. *Myoxus glis* seems to be frequent and continous, in areas ranging froin sea level to wooded mountains.

Key words: Myoxidae, Calabria, Italy.

RIASSUNTO – *Stato delle conoscenze sui Mioxidi (Rodentia, Mammalia) in Calabria* – In Calabria, la regione piu meridionale della penisola italiana, Sono presenti quattro specie di Mioxidi: *Eliomys quercinus, Dryomys nitedula, Myoxus glis* e *Muscardinus avellanarius.* Gli scarsi dati paleontologici risalenti al Wiirm, di caverne della costa Tirrenica settentrionale segnalano la presenza di *E. quercinus, M. glis* e *M. avellanarius*. Anche i dati storici, non riportano la presenza di *D. nitedula*, rinvenuto in Aspromonte solo nel 1964 (von Lehmann, 1964). La distribuzione geografica attuale del Driomio in Italia meridionale comprende le inontagne calabresi e della Basilicata in cui seinbra legato alle faggete a quote superiori ai 1300 metri slm. Le conoscenze attuali sui Mioxidi in Calabria Sono piuttosto scarse e frammentarie poiché non Sono stati svolti studi specifici. La tnaggior parte dei dati disponibili riguardano il Moscardino, specie che si rinviene di frequente nei rigetti di rapaci (in particolare di *Tyto alba*) dal livello del mare fino a 1300 metri slm, sia nel bioma delle sclerofille che in quello delle caducifoglie. Scarse invece Sono le informazioni sul Quercino che ha probabilmente una distribuzione frammentata nella regione. Il Ghiro sembra essere frequente e distribuito con continuita dal livello del mare ai boschi montani.

Parole chiave: Myoxidae, Calabria, Italia

INTRODUCTION

In Calabria, the most southern region of the Italian peninsula, all the four

species of Italian Myoxids are present: *Eliomys quercinus, Dryomys nitedula, Myoxus glis* and *Muscardinus avellanarius*.

Both the paleontological evidence (Topa, 1933; Bulgarelli, 1973) and the few available historical data concerning the Calabrian fauna (Pugliese, 1849; Costa, 1859; Pagano, 1892; Lucifero, 1907) do not include the species *D. nitedula*, probably due to confusion with *E. quercinus*. The presence of *D. nitedula* was recorded for the first time only in 1964 in the Aspromonte Massif (von Lehmann, 1964).

The only fossil data refer to paleolithic caves of the Northern Calabrian Coast. In detail, in the "Torre Nave" Cave (Praia a Mare, Cosenza), dating from the middle and recent Würm, *E. quercinus, M. avellanarius, M. glis* were recorded (Bulgarelli, 1973). The faunistic remains of the cave also include red deer (*Cervus elaphus)* and roe deer (*Capreolus capreolus*), indicating that the coastal area was almost completely covered by wood sextending to the shore, and that the climate was more temperate than at present. In the Cirella Cave (Cosenza), dating from the old Würm, only *Myoxus glis* was found (Topa, 1933).

In this paper we summarize currently available data concerning the presence and actual distribution of Myoxids in Calabria, data which are scarce and fragmentary since no specific studies have been carried out previously in this region on this group of Rodents.

Most of the available data refer to specimens preserved in the "Microtheriological Collection of Calabria" (MCC) of the Department of Ecology, University of Calabria (Aloise et al., 1990; Cagnin et al., 1992) because the literature includes little information provided by other authors.

The bulk of the specimens were collected from bird of prey pellets, mostly barn owl (*Tyto alba*). Less numerous were the specimens found in pitfall traps used for terrestrial small mammals census (see Cagnin, 1991; Cagnin et al, 1991), or occasionally found dead, or simply recorded as being sighted.

THE CALABRIAN REGION

The Calabrian region is essentially mountainous, **60%** of its area lying between 500 and 2000 meters above sea level. Most of the region is formed by the crystalline rocks of the "Calabro Peloritano Arc". During the Pliocene era, the region was an archipelago of little islands less than 600-700 meters high; its actual shape was acheived only in the late Pleistocene (see Caloi et al., 1991). Due to Calabria's geographical position, situated in the middle of the Mediterranean basin, its fauna is composed of elements from different origins: Continental and Eurosiberian (the most part), Transadriatic, western Paleomediterranean, African plus some endemic species.

The Calabrian vegetation belongs to two biomes: sclerophyll biome and deciduous biome, asymmetrically distributed in the two sides of the region (Brandmayr et al., 1991) The sclerophyll biome comprises the "mediterranean-arid" (Oleo-Ceratonion) and the "mediterranean-temperate" (*Quercus ilex and Q. suber*) vegetational belts. The deciduous biome comprises the lower "samnitic belt" (*Q. virgiliana* and *Q. cerris*) and the upper "subatlantic belt" (*Fagus*

sylvatica).

At the present time the wooded area covers 30 % of the entire region. Exploitation of the Calabrian woods began in early times, being very severe already by Roman times (see Placanica, 1985; Geotecneco, 1976).

Below we report a synthesis of the available data for the four species of Myoxids in Calabria.

Eliomys quercinus L. 1766

Literature: Cristaldi & Canipari, 1976; Amori et al., 1986.

Specimens examined: 1 complete specimen; 4 skulls from pellets.

Bioclimatic preferences: Deciduous biome, Sclerophyll biome.

The actual distribution of *Eliomys quercinus* in Calabria is poorly known (Fig. 1). Garden dormouse remains were found in only one out of 30 pellet sites of *Tyto alba* so far recorded in Calabria. At this site, located in the Northern part of the region at the foot of the Pollino Massif, *E. quercinus* represented 0.18 % of the owl's small mammal prey. *E. quercinus* is also known to be a rare prey item in pellets in the rest of Italy (Contoli, 1988; Scaravelli & Aloise, 1995).

Lucifero (1907) reported that *E. quercinus* was not very common in the Calabrian region, being known only in some villages, where it was captured with traps or hunted to be eaten.

Until now, the garden dormouse has been trapped only in S. Domenica di Ricadi (Catanzaro), in the Capo Vaticano promontory (Cristaldi & Canipari, 1976; Amori et al. , 1986). Therefore *E. quercinus* seems to be unevenly distributed and is probably only locally aboundant.

The garden dormouse has been recorded both in the deciduous and in the sclerophyll biome, from sea level to the medium montane altitude, from the Aspromonte Massif (where it was recorded also by Miller, 1912) to the Pollino Massif (Tab. 1).

The standard somatic and cranial characters of the specimens preserved in the MCC (Tab. 2 and *3)* show that the sizes of the Calabrian *E. quercinus* fall within the range of those of other Italian populations (Toschi, 1965).

In Calabria the subspecies *E. q. dichrurus* (Rafinesque, 1814) should be present, characterized by larger size and by a paler colour (Toschi, 1965; Storch, 1978 a; Filippucci et al., 1988).

Dryomys nitedula Pallas I779

Literature: von Lehmann, 1964; Aloise & Cagnin, 1987; Cagnin & Aloise, 1991.

Specimens examined: 7 complete specimens.

Bioclimatic preferences: Deciduous biome.

Dryomys nitedula was only recently recorded in Calabria; previously its known Italian distribution was limited to the North-Eastern Alps (Paolucci et al., 1989). No fossil or historical data are known for this species.

The available data in Calabria consist only of occasional trapping records, because this species was never found in bird of prey pellets, here as in the rest of Italy (Scaravelli & Aloise, 1995).

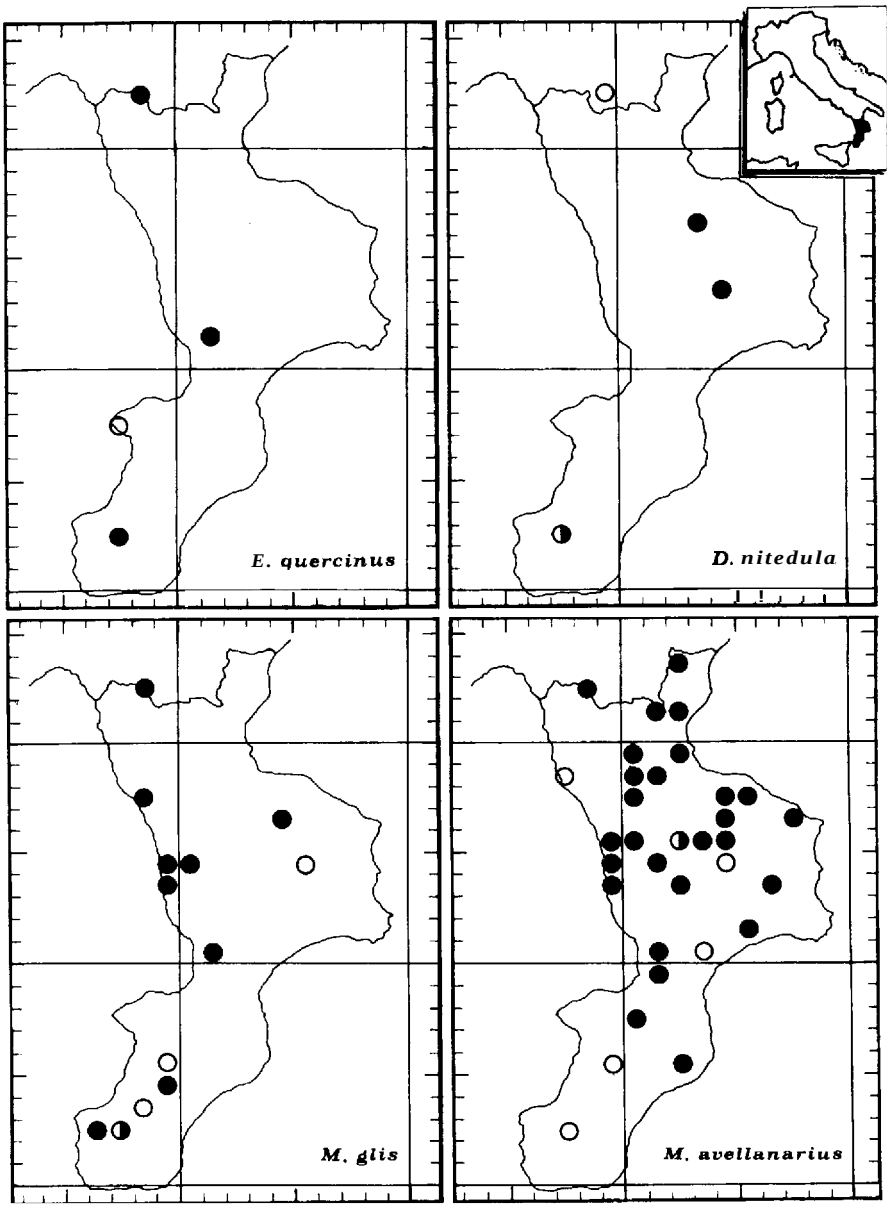

Fig. 1 – Map of distribution of the various Calabrian Myoxids on UTM gride (50x50 **km)** Black circles = MCC data: white circles = literature data.

The first record of the forest dormouse in Southern Italy is due to von Lehmann (1 964) for the Aspromonte Massif, where its presence was recently reconfirmed (Aloise & Cagnin, 1987). Subsequently, the forest dormouse was found in beech woods of the Basilicata versant of the Pollino Massif (Filippucci, 1986), of the Sila Piccola (Aloise & Cagnin, 1987), and Sila Grande Massifs (Authors, unpublished data).

Tab. 1 – Distribution of the various Calabrian Myoxids and some ecological features of the sample sites. Bioclimatic belts: A= Mediterranean-arid, B= Mediterranean-temperate, C= Samnitic, D= Subatlantic. Method: T= Traps, P= Pellets, O= Other. References: 1. Barbieri et al., 1990; 2. Cagnin & Aloise, 1988; 3. Cagnin & Aloise, 1991; 4. von Lehmann, 1977; 5. von Lehmann, 1961: 6. von Lehmann, 1964; 7 Sara & Zanca, 1989; 8. Cagnin et al., 1986; 9. Aloise et al., 1990; 10. Original data; 11. Pizzolotto et al., 1991; 12. Contoli et al., 1985; 13. Cagnin at al., 1991; 14. Filippucci & Kotsakis, 1995; 15. Filippucci 1986; 16. Aloise & Cagnin, 1987; 17. Cristaldi & Canipari, 1987; 18. Storch, 1978 c.

LOCALITY	UTM	m a.s.l.	BIOCLIMATIC BELTS	METHOD	REFERENCES
Eliomys quercinus					
Ricadi (S. Domenica)	WC 754802	50	A	T	17
Lametia (Nicastro)	XD140148	216	C	O	10
Laino Borgo (Pianette)	WE856270	400	C	P	10
S. Eufemia d'Aspromonte (Gambarie)	WC744354	700	C	O	10
Dryomys nitedula					
S. Stefano d'Aspromonte (Gambarie)	WC736244	1300	D	T	6
Longobucco (Colle dell'Esca)	XD370645	1620	D	T	10
Petilia P. (Colle Buonanotte)	XD437343	1660	D	T	16
Africo (Materazzelli)	WC782232	1830	D	T	3-16
Myoxus glis					
Fiumefreddo Bruzio (F. Marina)	WD918445	0	C	P	10
Amantea (Pol liano)	WD956346	80	C	P	10
Melicucco	WC922550	150	B	P	12
Maida	XDI 80018	300	C	P	10
Laino Borgo (Pianette)	WE856270	400	C	P	10
Calanna	WC640256	510	B	O	10
Falconara albanese	WD932472	550	C	O	10
Mendicino (Grotta AVIS)	XD022466	628	C	O	10
Cerenzia	XD536450	664	B	T	14
Cittanova (Zomero)	WC968412	942	D	O	10
Fagnano C. (Lago dei Due Uomini)	WD880792	1100	D	O	10
S. Cristina d'Aspromonte (Sanatorio)	WC736244	1167	D	P	7
S. Stefano d'Aspromonte (Gambarie)	WC736244	1300	D	T	10; 14
Longobucco (Macchia Giumenta)	XD428615	1300	D	O	8
Muscardinus avellanarius					
S. Pietro in Amantea	WD956323	0	C	P	9
Fiumefreddo Br. (Marina)	WD918445	0	C	P	9
Fiumefreddo Br. (F. di Marc)	WD928444	10	C	O	10
Ciro Marina (S. Venere)	XD780638	25	A	P	9
Belvcdcrc spinello (neto)	XD615398	30	A	P	9
Crucoli (sorvito)	XD720695	40	A	P	9
Bisignano (Pezzo Martino)	XD080737	50	C	P	1
Corigliano C. (Apollinara)	XD220935	50	A	P	1
Tarsia (Paradisiello)	XD070910	70	C	P	1
Tarsia	XD090853	70	C	P	1
Belvedere Spinello	XD655397	70	A	P	2
Bisignano (Macchia della Tavola)	XD040735	80	C	P	1
Tarsia (Spezzano)	XD050870	100	C	P	1
Pazzano (Marepotamo)	XC020713	140	C	P	9
Melicucco	XC922550	150	A	P	12
Caloveto (F. Trionto)	XD526748	180	A	T	10
Rende (C. da Gelata)	XD026554	250	C	O	10
Settingiano	WD3 10576	270	A	P	4
Curinga	XC 104972	300	B	P	10
Oriolo (Palazzo S. Stefano)	XE364324	300	B	P	10
Maida	XDI 80018	300	C	P	9
Pietrapaola(F. Rianni)	XD546730	350	B	T	10
Cropani (Cuturella)	XD544166	378	B	P	10

Tab. 1 - continued

LOCALITY	UTM	m a.s.l.	BIOCLIMATIC BELTS	METHOD	REFERENCES
Laino Borgo (Pianette)	WE856270	400	C	P	10
Pietrafitta (S Ippolito)	XD137461	420	C	P	1
Bonifati	WD774824	425	C	?	18
Longobardi (Serrone)	WD946414	450	C	O	10
S. Dcnictrio Corone	XDI 70808	521	C	P	10
Cerchiara di Cal. (Piana di Cerchiara)	XE124204	540	A	P	10
S. Fili	WD972542	730	C	T	11
Pazzano (Serre)	XC226594	840	C	P	9
S. Lucido (Passo della Crocetta)	WD358532	980	D	T	13
Ccrchiara di Cal. (Ranco di Fcrro)	XE150125	950	C	P	10
Spezzano P. (Cuponello)	XD325599	1120	D	T	8
S. Cristina d'Aspromonte (Sanatorio)	WC870314	1160	D	P	7
Parenti (Bocca di Piazza)	XD248338	1220	D	P	9
Spezzano P (Valle Capra)	XD255566	1270	D	T	10
Serra Pedace (Farfari)	XD365563	1300	D	P	8
Serra Pcdace (Forgia S. Bartolo)	XD301558	1300	D	P	8
Longobucco (Macchia della Giumenta)	XD428615	1300	D	P	8
S Eufemia d'Aspromonte (Spiti)	XC758298	1300	D	P	3
Spezzano Sila (Camigliatello)	XD248550	1300	D	T	5
S. Stefano d'Aspromonte (Garnbarie)	WC763244	1300	D	T	6
Lago Ampollino	XD5..4.	1300	D	T	14

The ecological distribution of *D. nitedula* seems to be tied in the southern part of its italian distribution to the presence of the Asynemauti-fagetum association. In fact, the available information on the trapping sites show it was always found in beech woods, from 1300 m a.s.l. **up** to over 1800 m a.s.l.

In contrast, Toschi (1965) describes the forest dormouse as living in N-E Italy at no more than 1500 m a.s.l. in various kinds of deciduous woods, as well as in parks, gardens and orchards in the plains and low mountains. **A** recent paper on the Eastern **Alps** (Paolucci et al., 1989) confirmed the presence of *D. nitedula* from 230 to 1600 m. a.s.l., in different types of vegetation, both deciduous and coniferous woods, characterized by high moisture, often in the presence of fresh flowing water.

Probably in the southern part of its distribution the forest dormouse can only find suitable ecological conditions (especially humidity), at higher altitudes because of increasing aridity in the southern part of the Italian peninsula.

Von Lehmann (1964) ascribed specimens trapped in the Aspromonte Massif to the new subspecies *D. n. aspromontis*, characterized by a clearer grey tone of the fur and by the white tail tip. The specimens that we have examined, both from the Aspromonte Massif and from the Sila Massifs, present the morphological characters typical of this subspecies, but shows maller sizes being mainly juveniles (Tab. 2-3).

Myoxus glis L. 1766

Literature: Cagnin et al., 1986; Contoli et al., 1985; Sara & Zanca, 1989; Filippucci & Kotsakis, 1995.

Specimens examined: 2 complete specimens; 7 skulls from pellets.

Bioclimatic preferences: Deciduous biome, Sclerophyll biome.

Myoxus glis is rarely preyed upon by owls in Calabria, or in the rest of Italy (Scaravelli & Aloise, 1995). The edible dormouse was found only in 16.7% of Barn owl (*Tyto alba*) diets. Nevertheless, available information seems to suggest that the species is widespread in Calabria. *Myoxus glis* ranges from the Pollino to the Aspromonte Massifs, from sea level to the middle montane zone (Tables 2 and 3). It seems to be mainly tied to the deciduous biome, where it lives in natural cavities (tree holes, caves) and artificial sites (human buildings) and repairs old nests.

Since Roman times, *M. glis* has been captured in autumn, to be eaten because it is considered a "gluttony" (Carpaneto & Cristaldi, 1995). In some Calabrian villages the tradition is still alive: the animals are shot at night when they leave their tree holes (Lucifero, 1907) or trapped.

In Calabria the subspecies *M. g. italicus* Barrett-Hamilton 1898 is present (Storch, 1978 b).

Muscardinus avellanarius L. 1758

Literature: Aloise et al., 1990; Amori et al., 1986; Barbieri et al., 1990; Cagnin & Aloise, 1988; Cagnin et al., 1986; Cagnin & Aloise, 1991; Cagnin et al., 1991; Contoli et al., 1985; Filippucci & Kotsakis, 1995; von Lehmann, 1961, 1977; Pizzolotto et al., 1991; Sara & Zanca, 1989.

Specimens examined: 7 complete specimens, 3 12 skulls from pellets.

Bioclimatic preferences: Deciduous biome, Sclerophyll biome.

Tab. 2 – Standard body measurements of dormouse specimens obtained from the "Microtheriological Collection of Calabria". HBL= Head and Body Length; TL= Tail Length; HFL= Hind Foot Length; EL= Ear Length.

COLL. NUMBER	SEX	LOCALITY	HBL	TL	HFL	EL
E. quercinus						
AS 39	F	S. Stefano d'Asp.(Gambaric)		108	25	22
D. nitedula						
SG 104	F juv.	Longobucco (Colle Esca)	56	52	14	9.5
SG 161	F juv.	Longobucco (Colle Esca)	58	54	17	10.22
SG 162	M juv.	Longobucco (Colle Esca)	58	56	15	10.05
SG 179	M	Longobucco (Colle Esca)	73	74	16	11.27
SP 42	M	Petilia P. (Colle Buonanotte)	77	76	18	11.13
AS 43	M juv.	Africo (Materazzelli)	68	65	18	7
AS 44	F juv.	Africo (Materazzelli)	61	64	18	10
x			64.42	63	16.57	9.88
SD			24.03	23.96	6.05	3.73
M. glis						
CO 451	F juv.	Mendicino (Grotta Avis)	96	67	21	12.39
AS 169	F	Cittanova (Zomero)	116	132	28	16.4
x			106	99.5	24.5	14.39
SD			62.01	66	14.57	8.55
M. avellanarius						
SG 72	M	Spezzano P. (Cuponello)	72	72	14	10.31
SG 191	F	Spezzano P. (Valle Capra)	63	70	14	8.54
CI 99	M Juv.	Caloveto (F. Trionto)	48	57	12	7
CI 283	F	Caloveto (F. Trionto)	63	65	14	9.1
CI 290	F	Pietrapaola (F. Rianni)	66	67	15	10.19
CO 138	F	S. Fili	67	67	16	9.43
Y			63.16	63.33	14.17	9.09
SD			25	25.52	5.49	3.61

Tab. 3 – Principal cranial measurements (sec. Niethammer & Krapp, 1978) of the specimens obtained from the "Microtheriological Collection of Calabria". CB= Condylobasal length; ZB= Zygoinatic breadth: MB= Mastoid breadth; IC= Interorbital constriction; ML= Mandible lenght; MH= Mandible height (distance from condylar to angolar processes): UMT= upper mandibular tooth-row; LMT= lower Mandibular tooth-row.

COLL NUMBER	SEX	LOCALITY	CB	ZB	MB	IC	UMT	ML	MH	LMT
E. quercinus										
2539	nd	Laino Borgo (Pianette)						1746	808	5 74
2558	nd	Laino Borgo (Pianette)						1845	808	549
2559	nd	Laino Borgo (Pianette)				493	5 66			
2560	nd	Laino Borgo (Pianettej				488	597	17.91	772	581
x						491	581	1794	796	568
SD						245	291	803	356	254
D. nitedula										
SG 161	F juv.	Longobucco (Colle Esca)	18.05		9.95	3.87	2.93	11.33	4.32	3.17
SG 162	M juv.	Longohucco (Colle Esca)	18.21		10.5	3.88	2.97	11.16	4.33	3.28
SG 179	M	Lougobucco (Colle Esca)	20.37	12.98	11 64	3.94	3.76	12.4	5.46	3.71
SP 42	M	Petilia P. (C. Buonanotte)	21 21	13.53	12.11		3.91	12.61	5.46	4.12
AS 43	M juv.	Africo (Materazzcllij	2048	12.83	11.63	3.23	11.38	4.91	3.07	
AS 44	F juv	Africo (Materazzelli)	18.37		11.23		3.31	11.52	4.31	3.17
x			19.45	13.11	11 18	3.9	3.35	11.73	4.79	2.89
SD			7.46	6.56	4.29	1.95	2.66	4.47	1.88	0.43
M. glis										
CO 451	F juv.	Mendicino (Grotta Avis)	28.31		15.33	4.85	5.8	17.03	8.45	6.11
AS 169	F	Cittanova (Zorneroj	36.66	23.41	17.28	5.32	7.52	22.93	11 98	7.81
2534	nd	Laino Rorgo (Pianettej				5.61	8.24			
2535	nd	Laino Borgo (Pianettc)				5.04	7.84			
2536	nd	Laino Borgo (Pianettej						19.87	9.11	8.47
2538	nd	Laino Borgo (Pianettej						22 03	10.78	8.45
2549	nd	Maida						18.64	8.38	7.76
2556	nd	Amantea (Pollianoj						19.89	9.36	8.84
2557	nd	Maida						19.87	9.25	8.21
x			32.48		16.31	5 21	7.35	17.19	9.62	7.08
SD			19.21		9.46	2.34	3 94	7.84	3.61	3.15
M. avellanarius										
SG 72	M	Spezzano P. (Cuponello)	20.49	13.43	10.49	3.57	5	12.92	6,95	4.29
SG 191	F	Spezzano P. (Valle Capra)	19.21	11.81	10.1	3.36	4.99	1223	6.38	4.54
CI 99	M juv.	Caloveto (F. Trionto)		9.73	8.88	3.03				
CI 283	F	Caloveto (F. Trionto)		12.13	10.23	3.33	4.72	1223	6.35	4.2
CI 290	F	Pietrapaola (F. Rianni)	20.8	13.28	11.24	3.5	4.74	12.51	6.9	4.48
CO 138	F	S. Fili	20.02	12.39	10.24	3.47	5.17	12.5	6.57	4.55
2448	nd	Pazzano (Scrre Calabre)				3.3	4.95	12.66	6.81	4.65
2476	nd	Belvedere Spinello (F. Neto)					4.69	11.97	6.75	4.39
2477	nd	Belvedere Spinello (F. Nctoj				3.35	4.57	12.44	6 58	4.31
2478	nd	Belvedere Spinello (F. Neto)				3.28	4.73	12.5	6.85	4.37
2481	nd	Belvedere Spiiiello (F. Neto)				3.27	4.97	12.35	6.88	4 21
2482	nd	Belvedere Spinello (F Ncto)				3.22	5.04	12.57	6 8	4.62
2484	nd	Belvedere Spinello (F. Neto)				3.29	5.18	12.45	6 93	4.61
2516	nd	Belvedere Spinello (F. Netoj				3.48	5.36	13.75	7.77	4.72
2519	nd	Belvedere Spinello (F. Neto)				3.38	5.23		7.5	4.9
2520	nd	Belvedere Spinello (F. Neto)				3.33	5.23	12.64	7.01	4.66
2522	nd	Belvedere Spinello (F. Neto)				3.12	5.16	12.96	7.05	4.88
2524	nd	Belvcdere Spiiiello (F. Ncto)				3.51	5.19		7.46	4.74
2525	nd	Belvedere Spinello (F. Neto)				3.3	5.14	13.18	7.28	4.87
2526	nd	Belvedere Spinello (F. Neto)				3.51	5.06	12.84	7.07	4.73
2527	nd	Belvedere Spinello (F. Ncto)				3.4	5.15	13.3	7.72	4.58
2528	nd	Belvedere Spinello (F Neto)				341	5221351		75486	

tab. 3 - continued.

COLL. NUMBER	SEX	LOCALITY	CB	ZB	MB	IC	UMT	ML	MH	LMT
2529	nd	Belvedere Spinello (F Neto)				3.29	5.23	13.17	6.99	3.29
2533	nd	Belvedere Spinello (F Ncto)				3.29	4.97	13.14	7.31	4.69
2540	nd	Pazzano (Serre Calahre)					5.19	12.41	7.11	4.5
2541	nd	Pazzano (Serre Calabre)				3.5	4.63	13.04	7.11	4.41
2542	nd	Pazzano (Scrrc Calabre)				3.23	4.86	12.79	6.85	
2543	nd	Pazzano (Serre Calahre)				3.54	4.7	1298	7.08	4.53
2544	nd	Pazzano (Serre Calahre)					5.02	12.7	6.66	4.71
2545	nd	Maida				3.28	4.75	12.78	6.65	4.6
2546	nd	Maida					4.9	11.86	6.33	4.4
2547	nd	Maida				3.25	4.88	13.14	7.24	4.74
2548	nd	Maida				3.31	4.76	12.9	6.61	4.5
x			20.13	12.08	10.19	3.34	4.98	12.75	6.97	458
SD			11.79	4.71	3.91	0.63	12.47	2.33	1.27	0.84

The historical data suggest that the common dormouse was widely distributed in tlie entire region, but provide contrasting evidence on its hibernation and edibility. Costa (1859) asserted that *A4 avellanarius* doesn't hibernate, reporting that the aninials living in olive-groves feed on fruits in winter can causes evere damages to tlie olive crops. Lucifero (1907), on the contrary, described nests with several specimens of common dormouse in deciduous and cork oak woods of the Jonic coast. According to this Author the species achieves a partial migration in autumn froin the high mountain to the plain, where it feeds on acorns before hibernating until March or April.

We trapped *M. avellanarius* in December at two sites (deciduous oak wood and sclerophyll maquis) of the Jonian coast. Probably, therefore, at least in this area, the species shows a reduction of the hibernating period.

The available data show that the distribution of *M. avellanarius* (Fig. 1) ranges from the North to the South of the region, from sea level to the mid mountain zone (0-1300 m), both in the sclerophyll and tlie deciduous biomes. It was found in different kinds of woods: therinophilous (*Quercus ilex* grove) and mesophilous (beech woods), deciduous (oak woods) and conifer woods (*Pinus laricio* woods) see Table 1.

Muscardinus avellanarius is more frequently preyed upon by predatory birds than the other Myoxids. We found tlie common dormouse at 50% of the *Tyto alba* pellet sites, against 17% for *Myoxus glis* and 2% for *Eliomys quercinus*. *Dryomys nitedula* was never found in pellets, either in Calabria or in other Italian regions (Scaravelli & Aloise, 1995).

Data from pellets from different pellet sites show that the frequencies of the presence of this species range froin 0.4% to 18% of the total number of prey items (averaging 3.29% + 3.70 SD). This means that the common dormouse usually represents a minor source of food for *Tyto alba*, probably because of its tow population density in nature. Locally, however, it can reach a higher density and therefore become a numerically important fraction of the Barn owl diet as was recorded at 5 sites, all belonging to the deciduous biome.

The main measurements of body and skull sizes (Tables 2 and 3) lie within the range of the Italian population (Miller, 1912; Toschi, 1965; Storch, 1978 c). In

Calabria the subspecies *M. a. speciosus* is present, characterized by a brilliant red colour of the fur, white strip of the throat reaching the ear and black stripe that crosses the eye (Toschi, 1965; Storch, 1978c)

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