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Part of arthropods in the diet of the common genet (*Genetta genetta* L.1758) in the National Park of El Kala (North-Est of Algeria)

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ABSTRACT
The diet of the common genet *Genetta genetta* was studied in the national park of El Kala which is characterized by a sub-humid bioclimatic. The diet has been studied by the analysis of 41 dropping collected monthly from July 2012 until April 2013. In relative abundance the arthropods are the most abundant (48.0%), followed by plants (42.5%) and amphibians (4.7%), and the other food categories have lower percentage. However, in relative biomass birds dominated (40.7%), followed by mammals (24.2%), the amphibians and the arthropods are present with significant percentage respectively (11.1%) and (10.3%). The application of the occurrence frequency index indicated that arthropods and plants are present in all the studied dropping and amphibians are founded in (73.2%) of analyzed dropping. The availability of arthropods has been studied using the pitfall traps. The Samples are synchronized with the collect of the common genet dropping. The index of savage is used to study the selection of arthropod prey of the common genet.

KEYWORDS: diet, common genet (*Genetta genetta*), arthropods, national park of El Kala.

INTRODUCTION

The common genet *Genetta genetta* (L. 1758) is present in the Mediterranean area of Europe, from Iberia to France. It also lives in North Africa, the savannah of Africa and southern Sahara (Lariviere and Calzada, 2001). The common genet is mostly found in Mediterranean forests of green and downy oak based in closed forests with numerous rocks that dominate the vegetation [15]. In Algeria its range stretches from the forests found along the coast to the forests of the Saharan Atlas. Virgos et al. [32] mention that when compared with the diet of other medium-sized Palaearctic carnivores, we can say that the common genet is intermediate between typical generalists (Martens *Martes* spp., Red Foxes *Vulpes vulpes* and Badgers *Meles meles*) and specialists (Otters *Lutra lutra*, Stoat *Mustela erminea* and Weasel *Mustela nivalis*). The diet of this species was studied in different countries, in France [16,14] in Spain [31,28,22] and in Portugal [26]. All these authors mention that the diet of the common genet is based on the predation of rodents and more precisely *Apodemus sylvaticus*. In Algeria, the studies that have been conducted in El Taref [10], in the National Park of Djurdjura [11], in the hunting center of Moutas (Tlemcen) [19], in the region of Kabylia [1], in the national park of El Kala [4], in the National Park of Djurdjura [2] and in the mountain of Bouzeguene [5] situated on the region of Kabylia. The high consumption of small mammals and the high-energy contribution of this prey have led some authors such as [11] and [19] to compare the diet of the common genet and the availability of these small mammals on the study

sites. However, despite the large number of arthropods species signaled by [10] and [11] no work has been directed to the study of the place of arthropods in the diet of the common genet or the selectivity of this predator for this food category. The study, which was done by [11] on the diet of the common genet at National Park of Djurdjura assumes that this predator has an effective search and not occasional of arthropods. The hypothesis set by these authors and the large number of arthropods collected in common genet dropping which were analyzed during this study, led us to choose the technique of pitfall trapping in order to study the availability of arthropods in the study area. We use this trapping technique in order to compare arthropods consumed by the common genet and those sampled in the pitfall traps. For information, the authors mentioned in this introduction have not, in their studies, focused on the importance of arthropods in the diet of the common genet. They also did not study the selectivity of arthropods by common genet.

Study area:

The chosen study area for the present study is the National Park of El-Kala (36° 47’ à 36° 54’ N.; 8° 16’ à 8° 43’ E.). The Park extends over a surface of 76.438 ha (Fig. 1). The national park of El Kala contains wetlands of international notoriety including 5 on the list of the Ramsar Convention [7]. The National Park of El-Kala belongs to sub-humid bioclimatic with mild winter. The sylvatic formation of this Park is mainly cork-oak which is distributed over 43.000 ha, bush represented by 10.649 ha, maritime pine noted on an area of 5.153 ha and alder occupying 3.000 ha. The other species are less developed [17]. In the present study area mammals are represented by 37 species. 14 are protected by legislation and thus made a real legacy to be preserved. Among these species, the Barbary Red Deer is the most precious mammal of the region [21]. Throughout the study period the highest average temperature noted was noted in July (29.8 °C) and the lowest average of temperature was reported in February (12.75 °C). The study area is characterized by its high rainfall. During the study year, it was reported 593.83 mm.

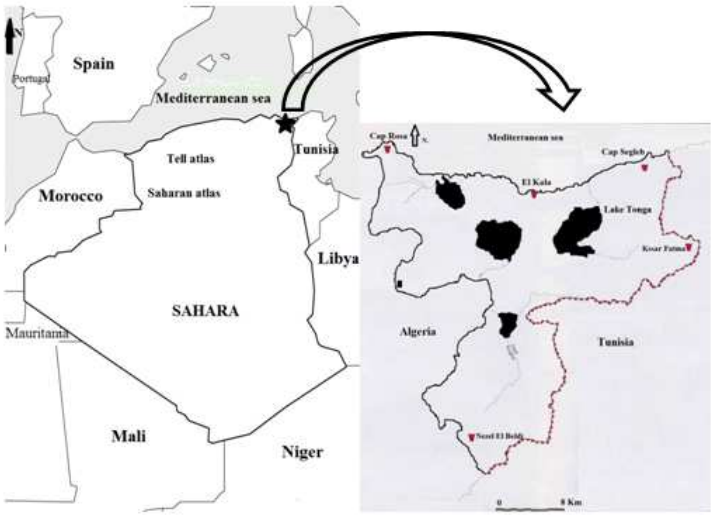

Fig. a – Geographical position of the National Park of El Kala

Fig. b – Lake of the National Park of kala

Lac and marsh

Fig. 1 – Presentation of National Park of El-Kala:

★ : National Park of El Kala

MATERIALS AND METHODS

The diet is designed by analyzing the content of the dropping of *Genetta genetta*. The droppings have been collected from a latrine located in the east of El Kala National Park (36° 52' N, 8° 29' E). In order to study the seasonal variation of the diet of the common genet, we were collecting the dropping from July 2012 to April 2013 (Table 1). We chose the drying method analysis to decorticate the dropping. The dropping has been macerated for 10 minutes in dilute ethanol. After that, the content of the droppings dropping was sorted using a pair of pliers with observation under a binocular microscope. The parties, which have been considered, are sclerotized parts of arthropods and bones of fish, amphibians, reptiles, birds and small mammal. We also based on birds feathers [9], small mammal hairs and scales of fish and reptiles. Decomposed plant material such as

stems, leaves, seeds and twig have also been recovered. The identification of the arthropods was performed with keys as those of [23, 25] for Coleopterans and [6] for identifying Orthopterans. The determination of arthropod species has been also based on the consultation of boxes from the Insectarium collection of the National School of Agronomy. The number of arthropod prey has been estimated by counting the number of jaws, heads, thorax and elytra. Systematically, each piece found was measured by a micrometer to evaluate the size of the prey and its biomass [30]. As for rodents, they are identified by the notes of [3]. The number of micro-mammals consumed for each meal is estimated by the number of bones (femur, tibia, humerus, jaw and incisor). The determination of the remained plants (leaves stem and seed), which have been recovered after decortication the dropping, is based on the use of herbals and seeds collected of some of these plants in the study area. The estimation of number of fruits is based on counting the number of seeds found in each analyzed dropping, for composed fruits such as *Rubus ulmifolius.* We estimate that each fruit has 17 seeds, it was necessary to converse the number of seeds recovered from *Rubus ulmifolius* in order to calculate the number of consumed fruits for this species. The availability of arthropods has been studied using the pitfall traps near the latrine chosen for the study of the diet. The Samples are synchronized with the collect of the common genet dropping. Le Berre [13] mentioned that pitfall traps set animals that actively move around. A total of 10 pitfall traps were placed at floor line at regular intervals of 5 m. We left the pitfall traps for 24 hours and the contents of 8 traps were separately recovered and filtered by removing water and other wastes. A total of 80 traps contents have been analyzed during the sampling period (Table 1). The determination of arthropods trapped was achieved by the use of the mentioned determination keys of Perrier [24] for the determination of the Hymenoptera and the collection of the insectarium of the National school of Agronomy.

For the relative abundance (RA %), the equation is used RA% = (Ni / N) x 100 in which Ni: Number of individuals of the species i and N: Total number of individuals of all species. According to Dajoz [8] the occurrence frequency is the ratio expressed as a percentage of the number of records of the species i divided by the total number of records FO% = (Ni/N)x100 with Ni: Number of records of the considered species and N: Total number of all records. As part of this work, the index of the relative biomass (B%), is the ratio between the weight (P) of individuals of the given species to the total weight (P) of prey of all species [33]. The study of the selection of arthropods of common genet is achieved by the use of Savage index Wi = Ai / Di quoted by Savage [29] which Ai is the relative abundance of arthropod *Genetta genetta* and Di is the relative abundance of arthropod species trapped by the pitfall traps. The Savage index values range from 0 (maximum negative selection) to infinity (maximum positive selection), where 1 signifies that there is no existence for the species i. This index enables us to verify the statistical significance by comparing test of X^2 with the degree of freedom [18].

Table 1: Number of analyzed dropping and the number of contents pitfall traps collected during the study period.

Seasons	Summer	Autumn	Winter	Spring
Number of analyzed dropping	13	12	10	6
Number of pitfall traps used for sampling	16	24	24	16

Results:

The number of preys identified in the diet of the common genet is 2146 items distributed between 8 categories. During the study period arthropods were the most numerous prey specimens comprising 48.0% of the diet, it was followed by plants (42.5%), the other categories have lower percentages. However the relative biomass of birds is the most important (40.7%), they were followed by mammals (24.2%), amphibians (11.1%) and arthropods (10.3%) (Table 2). The occurrence frequency reveals that the arthropods and plants are present in all the dropping and amphibians are reported in 73.2% of dropping. This may indicate the high consumption of these food categories by common genet throughout the study period. For the seasonal variations in the diet, the relative abundance of arthropods dominates in summer and autumn, followed by plants in this season. However in winter and spring plants are the most abundant, followed by arthropods. This difference can be explained by the low activity of arthropods during the cold seasons. The relative biomass of the birds was the dominant prey category during all seasons, followed by mammals (Table 2). The high dominance of relative abundance of arthropods and the presence of this food category in all dropping studied les us to orient this study to detail this food category.

The values of relative abundance of arachnids class 7.6% in autumn and 19.3% in spring. We notice a high consumption of insects by the common genet which leads us to study this food category in detail. It is reported that the beetles dominate the orders of insects in summer and winter, while Hymenoptera take first place in autumn and spring. However orthopterans are involved with relatively high percentages except in winter 2.3% (Table 3).

The diet of the common genet is composed of 275 species. The study of the selection of common genet preys considered only 223 species of arthropods category. The Savage selection index is used between arthropod species ingested by common genet and arthropods sampled by pitfall traps in the studied area. This index indicates that in summer the species belonging to the family Formicidae such as *Cataglyphis* sp., *Pheidole*

pallidula and *Tetramorium biskrens* were highly selected (appendix 1). And in autumn the most selected species according to the same index are Neanuridae sp. unident.,Thyphlocybidae sp. unident. And *Tetramorium biskrens* (appendix 1). In the winter season, the species positively selected are Trombidiidae sp. unident., Neanuridae sp. unident., Sminthuridae sp. unident., and *Rhizotrogus* sp. (appendix 2) and in spring the species selected are Trombidiidae sp. unident., Sminthuridae sp. unident., Coleoptera sp. unident., *Rhizotrogus* sp., Elateridae sp. unident., *Aphaenogaster dipilis*, *Crematogaster scutellaris* and *Componotus* sp. (appendix 2).

Table 2: Seasonal variations in the diet of the common genet.

Season	Summer			Autumn			Winter			Spring			Total		
Index Categories	R.A. %	R.B. %	O.F. %	R.A. %	R.B. %	O.F. %	R.A. %	R.B. %	O.F. %	R.A. %	R.B. %	O.F. %	R.A. %	R.B. %	O.F.%
Gastropods	0.70	0.01	23.08	2.94	0.10	58.33	0.33	0.01	20	0.47	0.02	33.33	1.26	0.04	34.15
Arthropods	58.41	9.67	100	69.60	13.70	100	29.04	6.54	100	35.13	11.20	100	48.04	10.28	100
Reptiles	1.40	1.31	46.15	0.15	0.31	8.33	0.33	0.78	20	0.23	0.58	16.67	0.53	0.75	24.39
Amphibians	6.07	7.10	61.54	5.87	16.14	83.33	3.10	8.49	80	3.75	12.48	66.67	4.70	11.05	73.17
Birds	2.34	48.83	61.54	1.03	30.72	50	0.49	25.14	30	1.17	58.09	66.67	1.26	40.69	51.22
Mammals	2.34	30.73	53.85	1.62	28.58	83.33	1.31	20.11	60	0.70	17.54	50	1.49	24.24	63.41
Fish	0	0	0	0.59	4.08	33.33	0.33	23.46	20	0	0	0	0.23	6.89	14.63
Plants	28.74	2.35	100	17.77	6.45	100	65.09	15.47	100	58.55	0.09	100	42.54	6.09	100

R.A.% : relative abundance; R.B.% : relative biomass ; O.F.%=Occurrence Frequency

Table 3: Seasonal variations in relative abundance of classes and orders of arthropods ingested by the common genet.

R.A. (%) of arthropods	Summer	Autumn	Winter	Spring
Arachnida	10	7.59	11.24	19.33
Diplopoda	0	1.05	0	2.67
Chilopoda	0.4	0	0	1.33
Insecta o. unident	0.4	0	0	0
Odonatoptera	1.6	0.63	0.56	0
Phasmatodea	0	0.21	0.56	0
Mantodea	0.4	0.21	0.56	0
Orthoptera	7.2	8.44	2.25	5.33
Blattoptera	1.2	0.21	0	0.67
Dermaptera	0.4	0	0.56	0
Heteroptera	5.6	3.80	7.30	1.33
Homoptera	2.0	13.50	1.69	0
Neuroptera	0	0.21	0	0
Coleoptera	45.6	25.74	46.07	30.67
Hymenoptera	22.4	31.65	26.40	36.00
Lepidoptera	2.8	5.91	1.69	2.00
Diptera	0	0.84	1.12	0.67

R.A. % : relative abundance ; O. unident. : Order unidentified

Discussion:

The study of the diet of the common genet was done after analyzing 41 droppings, a total of 2149 items were identified and distributed between 8 categories. However, Hamdine et al. [11] in the National Park of Djurdjura found only 1606 items belonged to 6 categories after analyzed 208 droppings. In the same Mostefai et al. [19] in the hunting preserve of Moutas, reported 1606 items distributed between 5 categories in 172 droppings analyzed. Brahmi et al. [5] found 1217 items in 100 droppings collected from Bouzguène Mountain in the Kabylie (Algeria). Amroun et al. [2] was identified 1970 items in 360 droppings collected in the Djurdjura National Park and noted. Boukheroufa et al. [4] in the El Kala national park found 723 items in 120 droppings analyzed (Table 4). Despite the large number of dropping analyzed by the authors previously mentioned, the number of the identified items is relatively lower than the present study.

The number of species recorded in the diet of the common genet is 275 species. However, Delibes et al. [10] in El Tarf area (Algeria) and in the Buhasen area (Morocco) noted a low number of prey species with respectively 41 and 31 species. Hamdine et al. [11] in the Djurdjura National Park and Brahmi et al. (2014) in Bouzeguene Mountain in Kabylie reported relatively a higher number of preys species than that found by the authors previously mentioned with respectively 121 and 154 species, but these values still relatively low to the number of species recorded in the present study. Palazon and Rafart [22] indicated a low number of prey species (69) despite the large number of dropping analyzed (1620) (Table 4).The ingested preys are spread over 8 food categories: gastropods, arthropods, reptiles, amphibians, birds, mammals, fish and plants. Delibes et al. [10] in El Tarf and Buhasen noted the presence of 8 food category including waste which was not noted in the present study. These authors did not report the presence of gastropods. The items mentioned by Hamdine et al. [11] was distributed between 6 food categories arthropods, reptiles, amphibians, birds, mammals and plants. However, the presence of gastropods and fish was not reported. In Spain, Ruiz-Olmo and Lopez-Martin [27] noted 7 food categories (mammals, birds, reptiles, amphibians, fishs, arthropods, plants). It is the same Rosalino and Santos-

Reis [26] in Portugal, found 7 food categories (mammals, birds, reptiles, arthropodss, gastropods, plantss, wastes), while those authors did not reported the presence of amphibians. Mostefai et al. [19] and Boukheroufa et al. [4] found the same food categories as Hamdine et al. [11] mentioned above. Amroun et al. [1] and Amroun et al. [2] did not report the presence of amphibians and fish in their study. Although Brahmi et al. [5] noted a wide variety of food categories (insects, crustaceans, arachnids, centipedes oligochaete, gastropods, fish, mammals, birds, reptiles and plants), but they did not notice the presence of amphibians. However Nadal and Riols [20] in Lot (Midi-Pyrenes, France) reported the presence of a large number of food category (oligochaetes, gastropods, insects, crustaceans, reptiles, amphibians, birds, mammals and fruits). The characteristics of the study site which is situated in a dense forest of cork oak and near to a lake with an area of 2300 ha provide to the common genet a wide variety of prey's category (terrestrial, aquatic and amphibian). The wide variety of food availability may explain the absence of waste in the diet of the common genet during the study period, while the majority of authors report the presence of waste in the diet of the genet.

Table 4: Number of items and species found in the common genet dropping collected in different regions in Algeria and surrounding the Mediterranean

Source	Study Area and contry	Number of dropping	Number of items	Number of species found in the dropping
Present study	El Kala national park (Algeria)	41	2149	275
Delibes et al. (1989)	El Taref (Algeria)	-	787	41
Delibes et al. (1989)	Buhasen (Morocco)	-	304	31
Lode et al. (1991)	Loire-Atlantique in western France	276	488	-
Hamdine et al. (1993)	Djurdjura national park(Algeria)	208	1606	121
Ruiz-Olmo and Lopez-Martin (1993)	Mediterranean riparian habitats of N.E. Spain	337	839	54
Le Jacques and Lode(1994)	Ognon valley west of France	600	1703	-
Rosalinoand Santos-Reis (2002)	Sintra-cascais national Parc (Portugal)	588	1926	83
Mostefai et al. (2003)	The hunting reserve of Moutas, Telemcen (Algeria)	172	954	-
Amroun et al. (2006)	The Kabylia(Algeria)	482	-	-
Boukheroufa et al. (2009)	El Kala national park (Algeria)	120	723	-
Palazon and Rafart(2010)	Navarra(Espagne)	1620	4411	69
Nadal and Riols(2011)	Lot (Midi-Pyrénées, France)	800	3978	-
Brahmi et al. (2014)	Bouzeguene Mountain in Kabylia (Algeria)	100	1217	154
Amroun et al. (2014)	Djurdjura national Park (Algérie)	360	1970	42

- : not mentioned

Relative abundance:

Throughout the study period arthropods dominate in relative abundance (48.0%), followed by plants (42.5%) and amphibians (4.7%). we noticed a low values of relative abundance of the other food categories. Delibes et al. [10] in the region of El Tarf also reported that arthropods are the most dominant (63.5%), followed by mammals (22.8%) and amphibians (7.1%). However Lode et al. [16] noted that mammals dominate in relative abundance with (72.5%), followed by birds, and those authors mentioned that insects and plants have low values respectively 7.6% and 1.4%. Hamdine et al. [11] reported that insects dominate in the diet of the common genet (57.4%). They were followed by mammals (25.0%), plants (7.0%) and birds (6, 97%). In the same Ruiz-Olmo and Lopez-Martin [27] mentioned that arthropods dominate (26.5%), followed by mammals (24.1%) and reptiles (7.3%). Our results are different from those found by Le Jacques and Lode [14] who reported that in relative abundance mammals dominate (62.4%), followed by birds (26.3%), and noted that insects and plants participate only with low percentages respectively 7.3% and 2.9%. In contrary to this study Rosalino and Santos-Reis [26] indicated that mammals are the most abundant (58%), followed by arthropods (15.3%), birds (11.1%) and plants (10.3%). Mostefai et al. [19] mentioned that Arthropods occur with a high percentage (47.0%), followed by mammals (28.0%) and birds (18.0%). Boukheroufa et al. [4] noted that arthropods are the most abundant (29.0%), followed by mammals (27.0%) and plants (21.0%). Palazon and Rafart [22] reported that mammals made up the highest proportion in the diet (36.0%), followed by fruits (21.0%), birds (18.0%) and arthropods (17.0%), amphibians and reptiles have low percentage. However Nadal and Riols [20] noted a high dominance of mammals (63.1%), they were followed by insects (10.5%), fruits (10.0%) and Oligochaeta (9.4%). Amroun et al. [2] in the Djurdjura National Park are also mentioned that the arthropods dominate (33.0%), followed by mammals (25.0%) and wild birds (14.0%). Our study was similar to Brahmi et al. (2014) in Bouzguene Mountain in Kabylia who mentioned that arthropods dominate (70.5%), followed by plants (28.4%).

Relative biomass of food categories:

During the study period birds dominated in relative biomass (40.7%), they were followed by mammals (24.2%), amphibians (11.1%) and arthropods (10.3%). These results differ from those found by Delibes et al. [10] in the region of El Tarf who mentioned that the mammals are the most dominant in relative biomass (61.9%), followed by amphibians (13.5%), reptiles (8.1%) and arthropods (5.1%). It should be noted that these authors reported that birds occur with low value of relative biomass 4.9%. The same authors in Buhasen region of Morocco noted a high dominance of mammalian preys (87.9%), followed by birds (6.5%). In contrary to the present study Lode et al. [16] in the west of France noted that mammals dominate in relative biomass (56.8%), followed by birds (43.2%). Rosalino and Santos-Reis [26] found different results of our study; those authors reported that mammals (90.5%) made up the highest proportion of the diet, followed by plants (5.2%) and birds (3.6%).

Our results differ from those found by Amroun et al. [1] in Kabylia, where mentioned a high relative biomass for mammals in agro-ecosystem (42.3%) and in agroforestry environment (40.0%). Those authors noted that birds have a low percentage of relative biomass. Similar results were found by Palazon and Rafart (2010) in Spain, where mammals represented 45.0% of the relative biomass, they were followed by birds (30.0%) and fish (12.0%), those authors mentioned that arthropods are a residual component. Our results were similar with those of Brahmi et al. [5], who mentioned that the birds made up the highest percentage of the diet (45.5%), followed by mammals (21.5%) and arthropods (17.6%).

Relative abundance of classes and orders of arthropods:

Among arthropods the class of insects is the most consumed throughout the study period (88.4%), followed by Arachnids (10.5%), however, Diplopoda and Chilopoda have very low percentages of relative abundance. Among the insects the most consumed order is Coleoptera (34.6%), followed by Hymenoptera (29.2%). Our results were similar with those obtained by Delibes et al. [10]. These authors reported that among the arthropods, the insects made up the highest proportion in the diet (97.8%). These authors also mentioned that the Coleoptera dominated during the study period (90.96%), however, unlike our study they reported that the Hymenoptera have very low percentage (0.4%). Our results are similar with those of Hamdine et al. [11] who also noted that insects dominate the other class of arthropodes (87.6%), followed by arachnids (12.4%). Those authors also found that the Coleoptera are most abundant (41.6%), followed by Dermaptera (32.8%) and Scorpionides (10.8%), indicating also that Hymenopetra are less represented (4.3%). The dominance of insects was also reported by Amroun et al. [2] with 87.8%, there were followed by the arachnids (9.3%) and Myriapoda (2.9%). These authors reported that the Coleoptera (65.7%) represented the most common insects prey, followed by Orthoptera (13.4%). However the Hymenoptera were consumed with a small percentage (4.9%). Similar results are recorded by Brahmi et al. [5] in Bouzguene Mountain, where 94.87% of the diet of common genet consisted of insects. Also these authors reported that Coleoptera (58.3%) formed the highest percentage of the diet, followed by Hymenoptera (19.3%), Orthoptera (7.6%) and Dermaptera (6.5%).

Savage index:

Some authors such as Lode et al. [16] and Le Jacques and Lode [14] reported that mammalian prey dominate the diet of the common genet precisely the Muridae wood mouse (*Apodemus sylvaticus*), during their study period those authors in conjunction with diet study of common genet, they studied the relative abundance of wood mouse populations by the use of traps. However in this study a result of the high consumption and the large arthropods diversity in the diet of the common genet, we have chosen to study monthly the availability of arthropods by using pitfall traps.

There are two ‘food’ groups of common genet: (i) Genets which feed on a wide food spectrum, especially arthropods and (ii) Genets which feed on small mammals at a high frequency, while the remaining prey items are scarce or absent [32]. The analysis of results allowed us to report the presence of 2149 items distributed between 275 species including 223 species of arthropods, this food category provided the richness and the diversity of the diet of the common genet in the region of El Kala. Referring to Virgos et al. [32] we noted that the genet in the El Kala region behaves like the first group ‘in the region of El Kala the common genet has a wide food spectrum, especially arthropods.

Appendix 1: Arthropods prey selection by the common genet in summer and autumn.

Seasons	Summer				Autumn			
Species	Ai	Di	Wi		Ai	Di	Wi	
Aranea sp. 1 unident.	-	-	-	-	1,27	1,56	0,81	ns
Dysdera sp.	-	-	-	-	0	0,39	0	ns
Lycosidae sp. unident.	0,8	0,54	1,48	ns	-	-	-	-
Gnaphosidae sp. unident.	1,6	2,17	0,74	ns	1,05	0,39	2,69	ns
Gamasidae sp. unident.	0	0,54	0	ns	-	-	-	-
Oribates sp.	-	-	-	-	2,53	0,78	3,24	*
Euzetes globulus	-	-	-	-	0	0,39	0	ns
Galumnidae sp. unident.	-	-	-	-	0	0,78	0	ns

Trombididae sp. unident.	-	-	-	-	0	1,17	0	*
Onicidae sp. unident	0	0,54	0	ns	0	0,39	0	ns
Trichoniscus sp.	-	-	-	-	0	1,17	0	*
Iulus sp.	-	-	-	-	0,84	0,78	1,08	ns
Entomobryidae sp. unident.	-	-	-	-	0	1,17	0	*
Neanuridae sp. unident.	-	-	-	-	0	71,48	0	**
Anisolabis mauritanicus	-	-	-	-	0	0,39	0	ns
Coleoptera sp.unident.	1,2	0,54	2,22	ns	0	0,39	0	ns
Hydrophilidae sp. unident.	0	0,54	0	ns	-	-	-	-
Rhizotrogus sp.	-	-	-	-	0,84	0,39	2,15	ns
Pleurophorus sp.	0	0,54	0	ns	-	-	-	-
Ontophagus sp.	0	0,54	0	ns	-	-	-	-
Akis sp.	-	-	-	-	0	0,39	0	ns
Phalacridae sp.1unident.	0	1,09	0	*	-	-	-	-
Anthicus floralis	0	3,8	0	*	0,21	0,39	0,54	ns
Gyrinidae sp. 1unident.	-	-	-	-	0,63	0,39	1,62	ns
Bethylidae sp. unident..	0	0,54	0	ns	-	-	-	-
Cataglyphis sp.	0	8,7	0	**	-	-	-	-
Aphaenogaster testaceo pilosa	0,8	1,63	0,49	ns	-	-	-	-
Aphaenogaster sardoa	0	2,72	0	*	-	-	-	-
Crematogaster sp.	0	0,54	0	ns	-	-	-	-
Componotus sp.	0,8	0,54	1,48	ns	-	-	-	-
Pheidole pallidula	0,4	7,61	0,05	**	1,48	9,38	0,16	ns
Tapinoma nigerrimum	1,2	5,98	0,20	*	1,48	1,95	0,76	ns
Tetramorium biskrensis	10,8	60,33	0,18	**	12,24	3,13	3,91	**
Monomorium sp.	-	-	-	-	0	0,78	0	ns
Diptera sp. unident.	-	-	-	-	0	0,78	0	ns
Sciara bicolor	-	-	-	-	0	0,39	0	ns
Phoridae sp. unident.	0	0,54	0	ns	-	-	-	-

Ai: is the proportion of item in the diet of common genet; Di:is the proportion of same item in environment; Wi:is the Savage index; ns: P > 0.05; *: P < 0.05; **: P < 0.01; The significance levels were obtained applying Bonferroni's correction (a/number of categories);
- : not mentioned.

Appendix 2: Arthropods prey selection by the common genetin winter and spring

Seasons	Winter				Spring			
Species	Ai	Di	Wi		Ai	Di	Wi	
Garypatidae sp. unident.	0,56	1,06	0,53	ns	-	-	-	-
Obisium sp.	-	-	-	-	0	1,85	0	*
Aranea sp. 1 unident.	2,25	1,06	2,12	ns	2	1,85	1,08	ns
*Dysdera*sp.	3,33	1,85	1,8	ns	3,33	1,85	1,8	ns
Lycosidae sp. unident.	0	1,06	0	*	-	-	-	-
Gnaphosidae sp. unident.	-	-	-	-	1,33	1,85	0,72	ns
Salticidae sp. unident.	0	1,06	0	*	-	-	-	-
Acari sp. 1 unident.	0	1,06	0	*	2	1,85	1,08	ns
Oribates sp.	1,12	1,06	1,06	ns	5,33	3,7	1,44	ns
Galumnidae sp. unident.	0	1,06	0	*	0	3,7	0	*
Trombididae sp. unident.	0	8,51	0	**	0	7,41	0	**
Brachychtonidae sp. unident.	-	-	-	-	0	1,85	0	*
Entomobryidae sp. unident.	0	2,13	0	*	-	-	-	-
Neanuridae sp. unident.	0	14,89	0	**	-	-	-	-
Sminthuridae sp. unident.	0	5,32	0	**	0	5,56	0	**
Ephemeroptera sp. unident.	-	-	-	-	0	3,7	0	*
Gryllidae sp. unident.	-	-	-	-	0,67	1,85	0,36	ns
Lobolampra sp.	-	-	-	-	0	1,85	0	*
Cicadellidae sp. unident.	0	1,06	0	*	-	-	-	-
Thyphlocybidae sp. unident.	1,69	1,06	1,59	ns	-	-	-	-
Myrmeleontidae sp. unident.	-	-	-	-	0	9,26	0	**
*Coleoptera*sp.1unident.	5,06	1,06	4,77	*	0	1,85	0	*
Cicindela campestris	0	1,06	0	*	-	-	-	-
Cleridae sp. unident.	-	-	-	-	0	1,85	0	*
Scymnus sp.	-	-	-	-	0	1,85	0	*
Harpalidae sp. unident.	0	1,06	0	*	1,33	1,85	0,72	ns
Homaloplia sp.	-	-	-	-	0	1,85	0	*
Copris hispanus	-	-	-	-	4	1,85	2,16	ns
Elateridae sp. unident.	-	-	-	-	0	11,11	0	**
Tenebrionidae sp. unident.	0	1,06	0	*	0,67	1,85	0,36	ns
Akis sp.	0	4,26	0	*	-	-	-	-
Cantharidaesp.unident.	-	-	-	-	0	3,7	0	*
Cryptophagidae sp. unident.	0	1,06	0	*	-	-	-	-
Staphylinidae sp. unident.	3,37	1,06	3,18	*	-	-	-	-
Curculionidae sp. unident.	0,56	1,06	0,53	ns	-	-	-	-
Chalcidae sp. unident.	0	1,06	0	*	0,67	1,85	0,36	ns

Aphelinidae sp. unident.	0	1,06	0	*	-	-	-	-
Cataglyphis sp.	0,56	1,06	0,53	ns	-	-	-	-
Aphaenogaster sp.	0,56	5,32	0,11	*	0	12,96	0	**
Aphaenogaster testaceo pilosa	0	1,06	0	*	-	-	-	-
Crematogaster scutellaris	0,56	1,06	0,53	ns	0,67	1,85	0,36	ns
Componotus sp.	0,56	1,06	0,53	ns				
Messor sp.	1,12	1,06	1,06	ns	0,67	1,85	0,36	ns
Pheidole pallidula	4,49	11,7	0,38	*	-	-	-	-
Tapinoma nigerrimum	4,49	5,32	0,84	ns	-	-	-	-
Tetramorium biskrensis	7,87	1,06	7,42	*	3,33	1,85	1,8	ns
Monomorium sp.	0,56	5,32	0,11	*	-	-	-	-
Monomorium salamonis	0	1,06	0	*	-	-	-	-
Noctuidaesp.unident.	1,12	2,13	0,53	ns	-	-	-	-
Nematocera sp. unident.	-	-	-	-	0	1,85	0	*

Ai: is the proportion of item in the diet of common genet; Di:is the proportion of same item in environment; Wi:is the Savage index; ns: P > 0.05; *: P < 0.05; **: P < 0.01; The significance levels were obtained applying Bonferroni's correction (a/number of categories);
- : not mentioned.

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