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F. FAGOTTO (*)

THE SPEKE'S GAZELLE AND ITS HABITAT IN SOMALIA

Riassunto — *La Gazzella di Speke e il suo ambiente in Somalia.* L'Autore presenta la Gazella di Speke nell'arido ambiente della Somalia, in base alle osservazioni compiute durante gli anni 1969, 1970, 1974 e 1975.

Viene dato particolare risalto alla flora e alla vegetazione dei territori in cui vive questa elegante Gazzella.

Abstract — The Author presents the Speke's Gazelle in the arid Somali environment, through the observations made in 1969-70 and 1974-75.

Particular attention is given to flora and plant communities where this elegant animal is found.

Key words — Speke's gazelle; Somali environment.

It is known that the Somali region, in East Africa, shows a distinct ecological physiognomy. This territory is dominated by a monsoon climate with very poor annual rainfall (oscillating from 300 to 600 mm/year) which decreases by degrees going from south to north.

This gives the region a general aspect of aridity which is reflected in the fauna and vegetation.

The flora of this area is known through the works published by CHIOVENDA (1929, 1932, 1936), SENNI (1935), CIFERRI (1939), GLOVER (1947) and CUFODONTIS (1953-72); the vegetation was studied particularly by GILLET (1941), GILLILAND (1952), PICHI-SERMOLLI (1957) and HEMMING (1966).

According to the PICHI-SERMOLLI terminology (1955, 1957) the principal plant formations are: xerophilous open woodland, broken xerophilous open woodland, savannah (various types), coastal formations, shrub steppe, grass perennial herb and subshrub steppe, desert.

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To this variety of vegetation corresponds a faunistic variety. Mammals, which have become better known thanks to the work done by DRAKE-BROCKMAN (1910), DE BEAUX (1934), SIMONETTA (1966, 1967, 1968), FUNAIOLI (1967, 1968), FAGOTTO (1976, 1977), show a specific ecological adaptation.

Some species are found exclusively in the Somali region (which besides Somalia includes part of Kenya and Ethiopia). Among these species can be cited: *Ammendorcas clarkei* (Thomas), *Dorcatragus megalotis* (Menges), *Madoqua phillipsi* Thomas, *M. swaynei* Thomas, *Giraffa camelopardalis reticulata* De Winton, *Equus grevyi* Oustalet, *E. asinus somalicus* P.L. Sclater, *Gazella spekei* Blyth.

This last species nowadays is found north of Mogadishu, along all the coastal steppe almost as far as Guardafui Cape (the extreme northeast point), and in the arid inlands of North Somalia.

The observations here reported particularly regard the coastal environment between Mogadishu and Meregh (about 280 Km).

The dominant features of this territory are the mobile and the consolidated dunes. The latter are more diffused and are generally covered with an herbaceous razed vegetation; this gives them an aspect which is ecologically well distinct from the surrounding woodlands. They can range towards the interior for 30 and more kilometres and can be seen in the guise of plains interrupted by frequent gently rolling knolls.

The sandy coastal landscape is sometimes broken by madreporic outcrops and bare areas covered with stones.

Mobile dunes can deeply wedge into the described aspects along with sandy tongues of aeolic erosion.

Owing to violent monsoon activity numerous phytogenetic microreliefs can be created giving the territory a particular aspect.

The vegetation of this area is called coastal formations by PICHI-SERMOLLI (1957). I prefer to indicate it as a coastal subdesert razed pseudosteppe. It makes up the characteristic environment of Speke's Gazelle. It is an homogeneous vegetation on sands whose species mainly belong to the Cyperaceae, Acanthaceae, Convolvulaceae, Chenopodiaceae, Rubiaceae, Boraginaceae, Poaceae, Aizoaceae families.

On the whole this vegetation covers about 80% of the soil; its height does not exceed 10-20 cm. Generally they are rhizomatous, procumbent and caespitose species, with rosettes. Geophytes, hemicryptophytes and small chamaephytes are the commonest biological forms.

The dominant species is *Cyperus chordorrhizus* Chiov., accompanied by *C. bulbosus* Vahl., *C. flavidus* Retz., *Gisekia pharnacioides* L., *Pterodiscus murex* L., *Commelinia forskalaei* Vahl, *Heliotropium zeylanicum* (Burm.) Lam., *H. benadirensis* Chiov., *Aristolochia rigida* Duch. ap. D.C., *Aerva lanata* (L.) Juss., *Cucumis ficifolius* A. Richard, *Boerhavia diffusa* L., *Ipomoea garkeana* Vatke, *Convolvulus subspatulatus* Vatke, *Hypoestes carnosula* Chiov.; other species are *Oldenlandia sarcophylla* Chiov. with its big stout rhizome, *Justicia flava* (Vahl) Vahl with yellow showy flowers, *Ruellia patula* Jacq. which forms very small and branched bushes. The Fabaceae are not abundant; common species are *Crotalaria sennii* Chiov., *Indigofera phillipsiae* Baker, *I. sparteola* Chiov., *Tephrosia quartiniana* Cuf. and *Zornia apiculata* Milne-Redh.

More diffused are some Poaceae, such as *Cenchrus ciliaris* L., *Dactyloctenium radulans* (R.Br.) P.B., *D. scindicum* Boiss., *Dignathia gracilis* Stapf., *Eragrostis ciliaris* (L.) R.Br. and *Panicum pinifolium* Chiov.

The alongshore vegetation is made up of halo-psammophilous species, among which is the easily found *Arthrocnemum indicum* Moq., the bushy *Atriplex farinosa* Forsk., the cosmopolite *Ipomoea pes-caprae* Sweet.

In this subdesert steppe it is not rare to find scattered shrubby species, such as *Boscia coriacea* Pax, *Lycium persicum* Miers, *Caralluma retrospiciens* (Ehrenb.) N.E. Br., *Maytenus obbiadensis* (Chiov.) Cuf., and at the base of mobile dunes *Scaevola plumieri* (L.) Vahl, *Calotropis procera* (Ait.) Dry. in Ait. and *Suaeda vera* J.F. Gmelin.

The above mentioned vegetation clearly forms a very poor pasture: notwithstanding, sheep and goats feed on it, while Speke's Gazelle finds here its typical habitat.

This Gazelle is perfectly adapted to its subdesert environment. It is a true semi-desert-dweller, living in the most desolate areas including stony or sandy regions.

Its general pale brownish fawn colour, in addition to the broad dark brown band separating the white underparts blends well with the sand and grass background.

The mimetic effect is increased by the air flickering due to heat radiation from the soil, so that if undisturbed this Gazelle lets one approach at a close distance relying on its mimetism. It does not hide itself among vegetation even if available. Many times I could get near, about 60-80 metres, walking slowly and pretending as if I



Photo 1 - An aspect of the subdesert razed steppe along the somali coast (60 Km north of Mogadishu), the typical environment of the Speke's Gazelle. In the background can be seen four specimens of this elegant Gazelle.

went towards another direction. The animal first remains motionless, then, if it is too closely approached, it impatiently moves its tail walking and running away at last.

It lives in small herds of 8-15 head which is the rule especially where the animal is disturbed. It inhabits both the inland plateau and the coast as far as the shoreline. North of Mogadishu, about 20 kilometres away, it is possible to find the first small groups of 3-5 individuals; going further, about as far as Uarsciek (60 kilometres from Mogadishu) the herds increase till 10-15 and more head. Beyond this area, near Adale and farther on, where this Gazelle is almost undisturbed, it is not difficult to find bigger herds made up of 30 and even 40 head. Once I counted exactly 43 individuals and another time just 47.

It seemed to me that this was not an occasional grouping, but a compact and lasting herd.

If run after, this Gazelle generally tends to maintain its herd without breaking it up.

During most of the year mixed herds are found. Males are very few in comparison with females; the latter are similar to the former but have thinner and shorter horns.

Both sexes have the characteristic extensible protuberance on the nose made up of three folds, which can be swollen when excited or alarmed up to tennis ball size giving a whistle-like sound. I was able to hear it only a few times.

This Gazelle is the only large animal which typically inhabits this subdesert environment. Occasionally other large animals can be seen if the bushland is not too far off. I can mention Soemmering's Gazelle (*Gazella soemmeringi* (Cretz.)), Gerenuk (*Litocranius walleri* (Brooke)), Ostrich (*Struthio camelus molybdophanes* Reich.) and the Warthog (*Phacochoerus aethiopicus* (Pallas)) which is the commonest of all.

This Gazelle feeds on various vegetal species. It especially utilizes *Cenchrus ciliaris*, *Cyperus chordorrhizus*, *Commelina forskaalaei*, *Indigofera sparteola*, *Justicia flava* and other numerous species from which it vigorously blows the sand away.

Water is not strictly necessary for Speke's Gazelle which can go a long time without it. In fact it does not normally rain from December to April and often from September to November.

Even during the « Gilal », the particularly hot and dry somali season, this Gazelle does not seem to suffer from the lack of water.

Births take place mostly during the rainy seasons (locally called « Gu » and « Agai »), from April to August, when pasture is rich with tender herbs.

I did not have the chance to observe any birth but I can affirm the above from the local Somali assertions and from the young I often saw in this period.

Nevertheless much must still be investigated about the reproduction habits of this animal.

Sometimes I could observe isolated male individuals, in October and November, which joined occasional herds, certainly in connection with mating activity. I even saw solitary males which did not seem to join any herd during any part of the year; they are difficult to approach and must probably be old males.

Nowadays this Gazelle cannot be said to be a rare species; in the previously mentioned area it is very easy to meet small and big herds.

Luckily local people do not hunt this animal whose meat is very good; besides this area is almost unpeopled.

The main carnivores which prey on Speke's Gazelle are the Caracal (*Felis caracal* Schreber) and the Common Jackal (*Canis aureus* L.); however, their pressure on this Gazelle is very limited. The Jackal, particularly, confines its predatory activity to injured animals and to the young.

Though being a nocturnal carnivore I sometimes saw one or two individuals in broad daylight scavenging on carcasses of this Gazelle and especially on those of sheep and goats. These domestic animals provide an easier prey for the Jackal; on the other hand, being present in considerable flocks, they are the direct feeding rivals of the Speke's Gazelle.

At any rate my observations at the end of 1975, compared with the ones of 1970, gave me the impression that the total number of this species has not increased in spite of the hunting prohibition since 1971.

I cannot say why this is so; nevertheless it is clear that this very localized African Gazelle though not threatened must be held under constant control in the future.

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