

SHORT COMMUNICATION

Evidence that the spotted hyena is present in the rainforest-savannah mosaic of south-east Gabon

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The majority (85%) of Gabon is covered with relatively intact tropical rainforests and thus much of Gabonese mammalian fauna is composed of forest specialists (Laurance et al. 2006). There are also areas of disturbed forest and savannah (Fig. 1).

Reports of spotted hyena have mostly come from savannah habitats, with few (or an absence of) confirmed reports within primary rainforests (Mills and Hofer 1998). In Gabon specifically, this species was present in the south-eastern grassland habitats (Haut-Ogooué province) and also in southern savannah inclusions near N'Dende and Tchibanga (Nyanga province), but might have avoided rainforest habitats and northern-Gabonese savannahs (Malbrant and Macfatchy 1949). The last documented record of spotted hyena in Haut-Ogooué province was from 1949 (Malbrant and Macfatchy 1949) and, as such, this species is currently considered locally extinct in Gabon, with no record (Wilks 1990) until a single observation in

2003 in the north-east of the country (Henschel and Ray 2003).

In neighbouring countries also, close to the Gabon border, there have been very few confirmed reports of this species. In Congo, there are records from two localities: in the northwest of the country in Odzala National Park and nearby Lekoli-Pandaka Faunal Reserve and M'Boko Hunting Reserve (Hecketsweiler 1990; Hecketsweiler et al. 1991), in the southwest of Congo in Conkouati Hunting Reserve (Hecketsweiler and Mokoko Ikonga 1991; Doumenge 1992). In Equatorial Guinea, there has been one record from Rio Muni (Juste and Castroviejo 1992), the status being otherwise unknown (Fa 1991). In Cameroon, at last, the species was historically widespread in the northern Savannah zone (Jeannin 1936). It is now still recorded around protected areas and around at least 23 gazetted hunting zones (Mills and Hofer 1998) and may occur in forest reserves (Depierre and Vivien 1992). But these records concern the northern part of Cameroon, far from the Gabon border.

This paper presents new evidence for the presence of the spotted hyena in the rainforest-savannah mosaic habitat of the Haut-Ogooué province.

Observations were made in the rainforest-savannah mosaic of the department of Franceville in the

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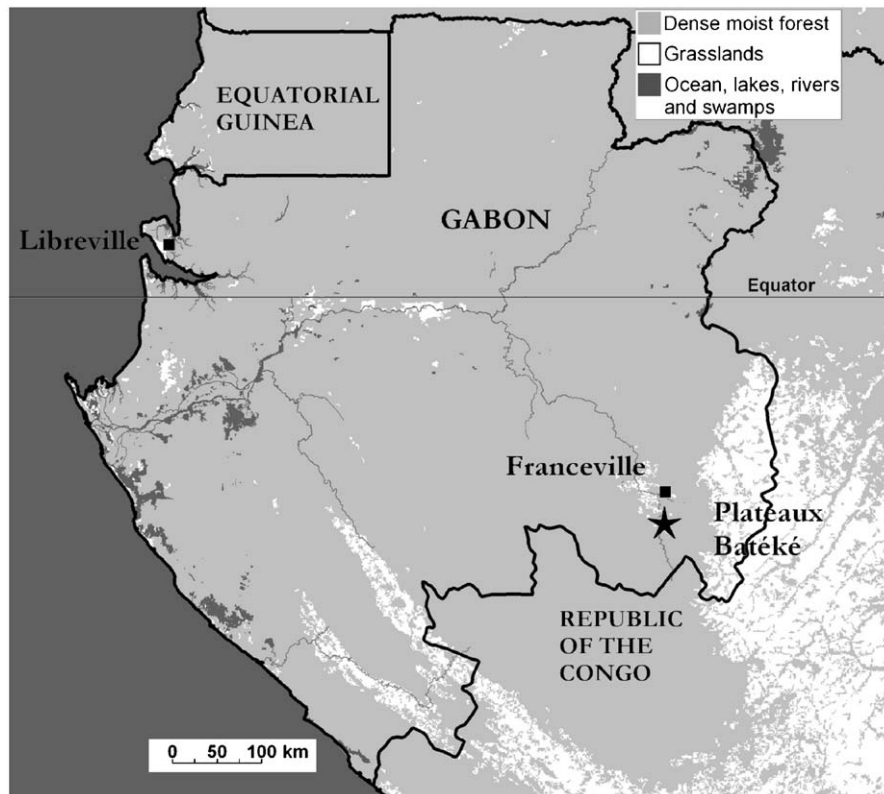


Fig. 1. Location of fresh records for spotted hyena (*Crocuta crocuta*) near Franceville (Haut-Ogooué province) in southern Gabon (★; 01°53.909' S/13°35.657' E). Land cover details are based upon the GLC2000 digital database (GLC2000, 2003).

Haut-Ogooué province of Gabon. During the nights of 05/06 July 2008 and 15/16 January 2009, fresh and well conserved spoor of spotted hyenas (*Crocuta crocuta*; Erxleben, 1777) had been deposited on the same rainforest logging trail, next to a dust road, in a soft sand substrate (01°53.909' S/13°35.657' E; Fig. 1). The second spoor also continued along the road southwards (until 01°54.407' S/13°35.456' E). The footprints were counted the following day. To document each spoor, the best marked footprints were carefully measured and photographed. The following measurements were taken: (1) the width of the footprint at the widest point; (2) the length of the footprint (not including the claws or dew claws); and (3) the heel width (Fig. 2). As a fast moving foot entering a soft substrate could leave an impression larger than the actual foot, care was taken to measure the size of the foot at the bottom of the imprint. The first time, plaster casts of five front and three hind footprints were moulded *in situ* to analyse the size and the shape of claws. Finally, some footprints and plaster casts were photographed digitally at 7.2 mega pixels using natural light (Fig. 2).

The first observed spoor comprised 128 footprints formed over a distance of approximately 150 m and belonged to a single individual. The second observed spoor comprised 143 footprints formed over a distance of approximately 800 m, following the spoor of a

bushbuck (*Tragelaphus scriptus*): same direction, same trajectory. It belonged to three individuals, of which one was a juvenile (76 footprints) and two were adults (67 footprints). Dimensions of the footprints are given in Table 1. According to the data reported in Stuart and Stuart (1994), the dimensions of the adults correspond to large individuals. The claws were narrow when viewed from above, but the plaster casts moulded from the first individual show that in side view they are broad at the base, strongly built, and approximately 20 mm long over the curve. Distinctive features of the spoor – footprints shapes, four toes on the fore- and hind-feet, and claws shapes – were characteristic of spotted hyena.

The spotted hyena is described as the most abundant large carnivore species in Africa with a current population size between 27,000 and 47,000 individuals (Höner et al. 2008). Populations are scattered in western and southern Africa, with a greater density of populations in the savannah-dominated eastern region of its distribution (Mills and Hofer 1998; Höner et al. 2008). Our observation was made in the rainforest-savannah mosaic directly linked to the savannahs of the Plateaux Batéké, which cover more than 35,000 km² throughout Gabon, the Republic of the Congo and the Democratic Republic of the Congo. The spotted hyena was once considered common in savannahs of the Haut-Ogooué province in Gabon (Malbrant and MacIatchy 1949).

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