

Habitat preference and diurnal activity pattern in the Sand Partridge, *Ammoperdix heyi heyi*

(Aves: Phasianidae)

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Abstract. The habitat preference and activity patterns of the Sand Partridge, *Ammoperdix heyi heyi* Temminck, 1825, in the Ibex Reserve in central Saudi Arabia were determined. The species prefers flood banks and rocky wadi beds, while open gravel plains, riverine vegetation and scree slopes were avoided during the hot summer months. Moderate vegetation cover of 5-20% and a woody vegetation height of 2-3 m were preferred. Early morning activity was highest during the day and was strictly related to sunrise. Evening activity was less pronounced and twilight encounters not observed. The impact of recreational activities on the foraging behaviour of Sand Partridges may be considerable in Wadi Ghabah, but since this is the only wadi regularly frequented by the local community, the overall impact on the population may be negligible.

Key words. Habitat choice, Ibex Reserve, Saudi Arabia, desert, phasianid.

Introduction

In the Arabian Peninsula, Sand Partridges of the nominate subspecies *Ammoperdix heyi heyi* Temminck, 1825 are recorded from the western and central highland plains with a few records from the central mountains, i.e. the Jebel Tuwaiq (CHILD & GRAINGER 1991, JENNINGS 1995) in which the Ibex Reserve is situated. The Sand Partridge is a widespread phasianid, inhabiting the deserts and semi-deserts of the Arabian Peninsula, north-eastern Africa (east of the River Nile), Sinai Peninsula and the southern Levant (CRAMP et al. 1983, URBAN et al. 1986, DEL HOYO et al. 1994). The species prefers steep, rocky slopes with sparse vegetation, but forages in rocky and sandy bottoms of steep sided wadis (CRAMP et al. 1983, PINSHOW et al. 1983, KAM et al. 1987). A previous study on the group size and composition of Sand Partridges in the Ibex Reserve (WRONSKI submitted) reported that the mean group size remained constant over the year in different wadis of the reserve, while the group encounter rate varied distinctively between seasons, with low rates during the cool season and high rates during the hot season. Those findings were in line with observations reported from high elevations in the Eilat Mountains in southern Israel where Sand Partridges follow the winter rains into the nearby lower levels but where they are absent during the breeding season (SHIRIHAI 1996). The previous study further determined differences in the encounter rate between wadis of different size, soil structure and vegetation type. This study provides further details on the habitat preferences in the most frequented wadi of the Ibex Reserve, i.e. the Wadi Ghabah which is part of the Wadi Mutim system in the east of the reserve. Furthermore, details on the diurnal activity patterns of Sand Partridges in the reserve are presented and related to sunrise and civil twilight.