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SAND GROUSE

SAND GROUSE (Pers. *kokar*, *sangḵᵛārak*, *bāqerqera*), a family (Pteroclididae) of game birds of which seven species are found in Persia (Ilām region. (5) Black-bellied sand grouse, *kokar-e šekam siāh* (*bāqerqera*), Pterocles orientalis (33-35); this is the largest sand grouse found in Persia, with the widest distribution, existing throughout the country except in the northern and southern coastal areas and southeastern Persia. (6) Crowned sand grouse, *kokar-e gandomi*, Pterocles coronatus (27-29), a species found throughout the eastern half of the country except the northern parts of Khorasan and Semnān provinces, and also along the Persian Gulf coast to Khuzestan. (7) Lichtenstein's sand grouse, *kokar-e rāhrāh*, Pterocles lichtensteinii, (24-26), which is the smallest and most rare of the Iranian sand grouse. It has a distribution similar to the spotted sand grouse, but in winter it ranges to northeastern Khorasan and westward to Khuzestan.

With the exception of Pallas's sand grouse, all the species found in Persia are year-round residents, and several, such as the black-bellied sand grouse, pin-tailed sand grouse and crowned sand grouse, were formerly widespread and abundant. Regrettably, numbers of all species have declined dramatically, probably due primarily to indiscriminate hunting using four-wheel drive vehicles and also degradation of the steppe and desert environments (for a general view, see Firouz, 1999, p. 7ff.; idem, 2004, p. 4ff.).

The sexes differ slightly in plumage, but there is little or no seasonal variation. Sand grouse have a habit of flying in flocks to favorite drinking places, usually in the morning and late afternoon and often over large distances; round-trip

flights sometimes reach up to 150 km. Their speed during such flights is estimated to be about 80 km per hour. Flocks of more than one species may gather at such watering sites. Sand grouse pair off when breeding but are highly gregarious, particularly at watering places. They call in flight, attracting not only birds of the same species but other sand grouse as well. In the past, drinking flocks might number many hundreds and, occasionally, several thousand birds.

Breeding is, to a large extent, determined by rainfall—in other words—the availability of food. The nest is a simple scrape on the bare ground, sometimes in the shelter of a stone or shrub. The female incubates by day, and the male by night. The food is chiefly plant matter, shoots of desert grasses, and seeds. Chicks are not fed by their parents but are shown what to eat by the latter pecking at suitable kinds of food. Water is provided to chicks by a unique method: the male soaks his belly feathers during his daily drink, and the water retained is taken from the plumage by the chicks upon his return to the nest. The feathers of the belly in both sexes are specially adapted for this purpose, as the insides of these feathers against the body are equipped with microscopic filaments suitable for retaining water, and are areas where evaporation is reduced to a minimum during a bird's flight. Females do not generally soak their bellies, apparently only doing so if the mate has been killed or when the age of the young requires more water than the carrying capacity of the male. Studies appear to show, however, that the distance over which water can be carried in this manner is limited to about 30 km. The young can fly to water like the adults after the first molt, when they are about four to five weeks old.

It is interesting to note that Ḥamd-Allāh Mostawfi described this bird, which he called by its Arabic name *qaṭāt*, as being very smart (*saḵt zirak*), "so much so that it conceals its eggs in the sand in the desert, and after a space of time finds its way to them [again]." He also mentions the belief in the medicinal benefits of this bird: "Its blood rubbed on the body cures ringworm of the scalp. … Its flesh is beneficial in dropsy and obstructions of the liver, and in corruption of humors. The ashes of its bones mixed with olive oil will cause hair to grow on any part where it is applied as an ointment" (pp. 118-19; tr., pp. 85-86).

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(Eskandar Firouz)

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