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Last stand of the Blackbuck

The Bishnois preserve a species

There was a time many years ago, well before man had begun to indiscriminately hunt and poach, when the graceful Blackbuck roamed the great Indian plain in their thousands. Over time this species of the deer family was ruthlessly decimated but some numbers survived in a few areas.

The pockets where they survived were primarily around Bishnoi settlements in the desert of Rajasthan. This community is aggressively protective in its attitude to all wildlife, particularly the Blackbuck. Their unflinching vigilance has regenerated the numbers of this species. Poachers dare not trespass the area of the Blackbuck without knowing that they will incur the wrath of the Bishnois.







Left and above: *The display of a large adult stag during the courtship season. The desert terrain at Tal Chhappar in the Bikaner district is a perfect habitat for the Blackbuck*

Even in the days when hunting was the prerogative of royalty, the rulers very rarely violated the rules laid down by the Bishnois. Great care was taken to respect the sentiments of these traditional, true conservationists.

In the immediate post-independence era, when the Bishnois were fighting an almost losing battle to save the Blackbuck from extinction, the government of India armed itself with stringent laws to protect all wildlife, including this stunningly beautiful deer. This, together with the reasonably high replacement potential of this animal and the generally low predation pressure on this species has aided its regeneration in its desired habitats.

Our surveys of Blackbuck pockets in Gura Bishnoiyan village around Jodhpur have revealed certain interesting facts of its life in relation to the habitat conditions mainly dominated by *Prosopis juliflora* and *Prosopis cineraria* plant species. It is not uncommon to find Blackbuck herds of twenty to two hundred at one spot all along the Luni river basin surrounding Jodhpur, and often, the total Blackbuck population in a favourable habitat can be as high as three

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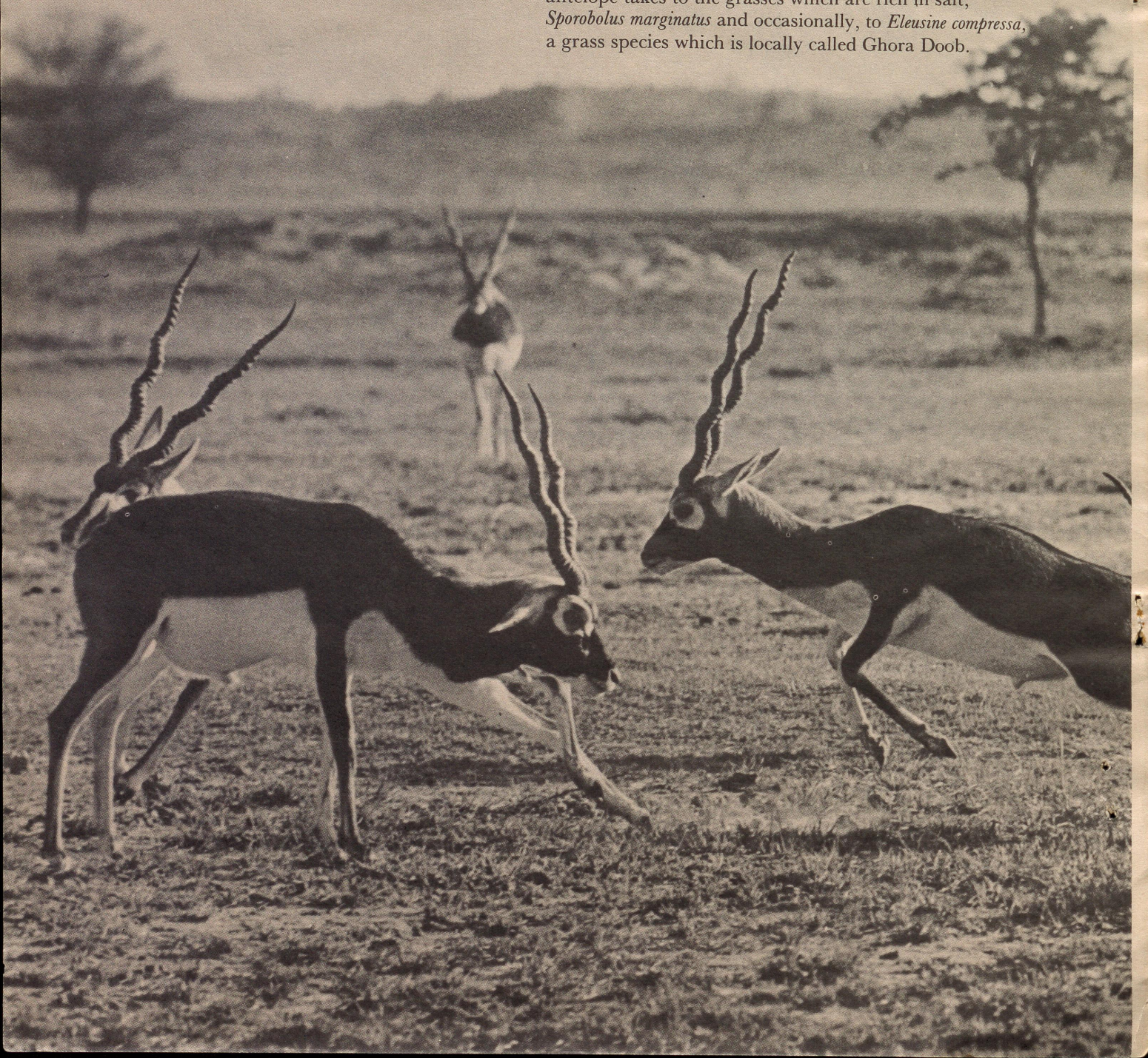
Two adult stags clash viciously during the courting season

to four thousand. According to an estimate made in 1980, the environs of Jodhpur harboured approximately twelve thousand animals of this species, with more than half the number being adult females, about a quarter adult males and the rest, sub-adult or juvenile animals of both sexes. Thus, rapid replenishment of stock appears to be a built-in characteristic of Blackbuck populations. A number of villages in this tract, all Bishnoi dominated, stand out as remarkably high density areas, like for example, Guda Bishnoiyan, Dhawa, Feench, Khejarli Kalan, Kakelav, Phitkasni and Lamba. Apart from the protective hands of the Bishnois, the other contributory factor for the concentration of Blackbucks around these villages is the surrounding foraging area. The Blackbuck is primarily a grazing animal like the sheep, unlike the goat and the Chinkara, or Indian gazelle, that also inhabits this desert and thrives on desert top feeds.

The Blackbuck is compelled therefore to seek grass-covered open countryside where there is enough for it to forage. Its preferred feeds include grasses like Doob, *Cynodon dactylon*, Dab, *Desmostachya bipinnata* and Manchi, *Dactyloctenium aegyptium*. In the summer, dried up patches

A group of stags indulge in a display of aggression to prove their individual supremacy. This behaviour predominates during courtship when males challenge one another to win the female

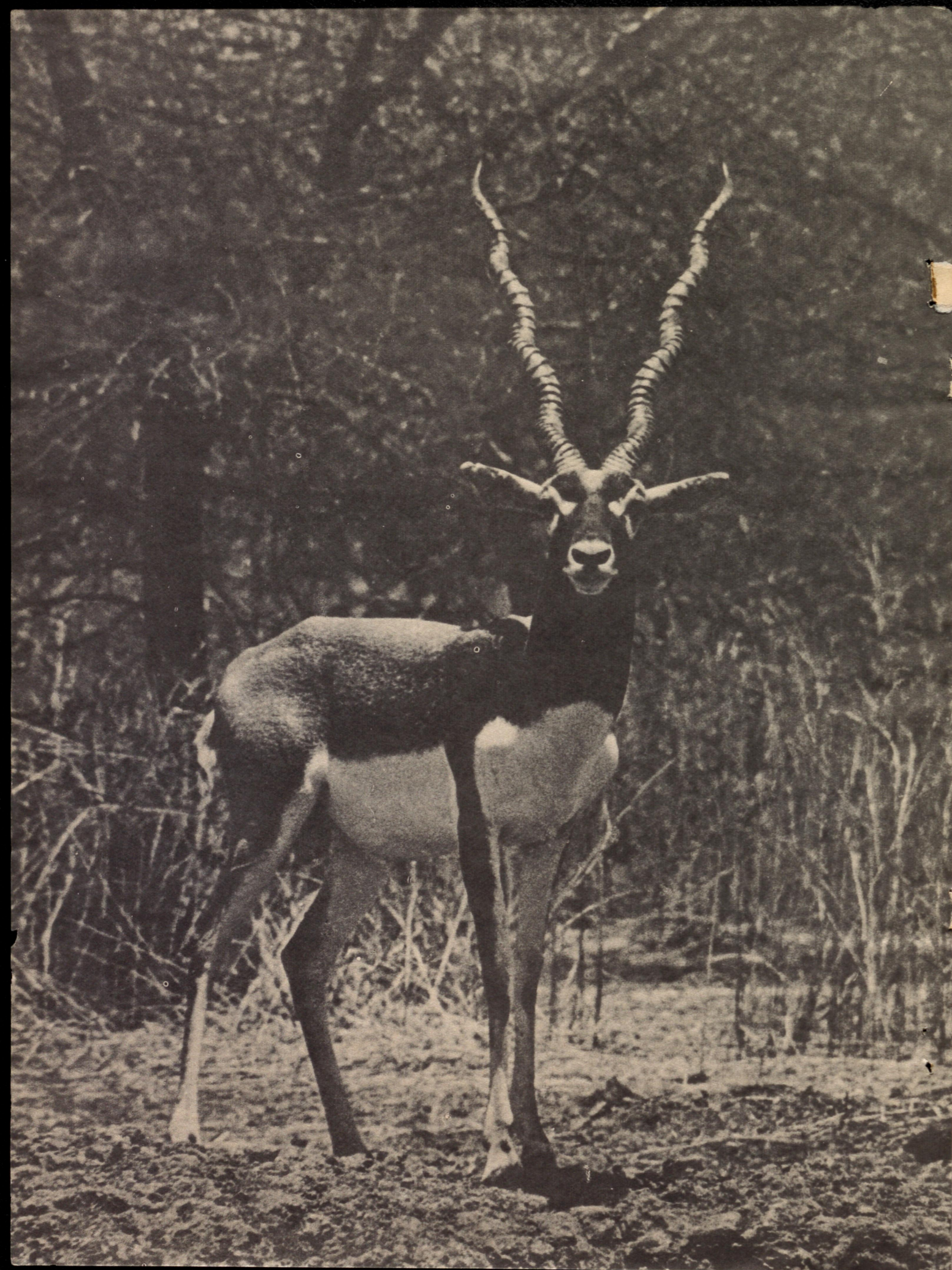
of Doob and Dab are relished by these animals, although the green, protein rich, succulent pods of that king of desert trees, Khejri or *Prosopis cineraria* which they voraciously consume during this season, contributes significantly to their survival. Blackbucks are particularly attracted to the bright orange-yellow flowers of the hardy, indigenous Rohida tree, *Tecomella undulata* and of the *Capparis decidua* shrub. The flowers are fairly rich in protein and are a source of several important micro-nutrients. The protein and moisture rich pods of the ubiquitous exotic, *Prosopis juliflora* or Vilayati babool, are also eaten by these antelopes during this time although much less than the Khejri pods. A common ground flora of the Thaar desert, *Molluga cerviana*, locally called Chiriva-Ro-Khet, which sprouts forth to life with the first monsoon shower, is part of the Blackbuck's normal diet. During the winter, this antelope takes to the grasses which are rich in salt, *Sporobolus marginatus* and occasionally, to *Eleusine compressa*, a grass species which is locally called Ghora Doob.



The soils of the Luni basin, which is the Blackbucks' range, are generally associated with high calcium carbonate, sodium and potassium contents and electrical conductivity values. These animals are also exposed to high mineral content in the drinking water. Their main water sources are the *nadis*, or natural water holes, that dot their habitats, albeit sparsely. The intense surface evaporation from these pools during the hotter seasons of the year gradually increase the concentrations of nitrogen and total soluble salts in the waters by as much as 200 and 400 percent respectively. The animals frequenting the *nadis* are, therefore, subject to high obligatory intakes of nitrogenous products and varied minerals. Thus, when nutrient availability in nature is extremely poor, the antelopes apparently do not suffer any undue protein or mineral malnutrition, and their condition seldom deteriorates.

The Blackbucks in the desert ingest a good deal of soil





Blackbuck at a water hole

Opposite: A splendid mature male Blackbuck with a fine set of spiralling horns

along with plant materials while they graze. This habit of soil ingestion is likely to have considerable ecological significance in that the minerals in the soil help in partially mitigating the animal's "salt hunger". Unlike the Chinkara, the Blackbuck does not seek the shade that nature provides. Even during the hottest part of a summer day, these animals are seen sitting scattered in open, scrub grazing lands. They hardly, if ever, evade the midday sun by sitting in the shade of trees. The radiant and thermal energy loads on their bodies must be considerable on such occasions. This peculiar behaviour of the Blackbuck is difficult to explain and will continue to be unfathomable unless it is experimentally verified whether its coat, though black in colour, actually reflects back much of the solar energy impinging on it, or that its body water turnover rate is quite low or further, that it has, like the camel, a labile body temperature.

The above account of the Blackbuck in relation to its desert habitation indicates that this species has, almost instinctively, become more or less hardy in its behaviour. It subsists primarily on grazing and has a high heat tolerance level. Its widespread distribution in the Luni basin, including its saline tracts of Khatu, Didwana, Tal Chhappar and suchlike, would speak of its rather high salt tolerance. Considering how meagre the sweet water resources are in the desert, the Blackbuck is one of the fittest denizens of this difficult habitat.