

THE SAIGA

By W. LINNARD

INTRODUCTION

The prospect of game-farming or game-cropping is very much in the news in parts of Africa to-day, as a means of conserving wild life and at the same time managing it so as to provide a supply of meat and other animal products. It is, therefore, very interesting to see how the Russians have succeeded in rescuing from extermination an animal only recently in grave danger of becoming extinct, and in converting it, in the space of a few years, into a major national resource. The animal at the centre of this exciting and encouraging story is the saiga, a small steppe antelope (*Saiga tatarica*). Sometimes called the big-nosed saiga, this antelope is found only in the U.S.S.R. It has a body length of 120 to 135 cm., stands 75 to 80 cm. at the shoulder, and weighs 40 to 45 kg. Its natural habitat is the steppe, an environment eminently suitable for a population of social ungulates.

HISTORY

The saiga was formerly a widespread and abundant animal. Fossil evidence from the middle and upper Pleistocene, the age of the woolly rhinoceros and the mammoth, shows that the saiga had an area of distribution stretching from England right across Eastern Europe, Russia, and Siberia to Alaska (see map).

However, gradual climatic changes and the associated changes in the vegetation steadily reduced this vast area. In addition to these environmental factors, in historic times the increasing human settlement and the spread of agriculture still further reduced the area and numbers of the saiga, and this trend was intensified by extensive hunting, and the depredations of the saiga's natural enemy, the wolf. By the eighteenth century the saiga was restricted to the dry steppes and semi-deserts of Southern Russia and Soviet Central Asia.

The saiga has always been hunted for food by the nomadic tribes of Asia—the Tartars, Mongols, Kazakhs, and so on. There was also a flourishing trade in horns for export to the East, where they were prized as aphrodisiacs. In the first half of the nineteenth century Russia exported annually many hundreds of thousands of pairs of horns to China.

By the beginning of the present century, the formerly abundant saiga had been reduced to a total population of probably no more than a thousand head, in a few widely separated and remote parts of Southern Russia (the Kalmyk area west of Astrakham) and Soviet Central Asia (the Ustyurt plateau, the Sarysu valley, the Bet-Pak-Dala steppe, and the Ili-Karatal interfluvium).

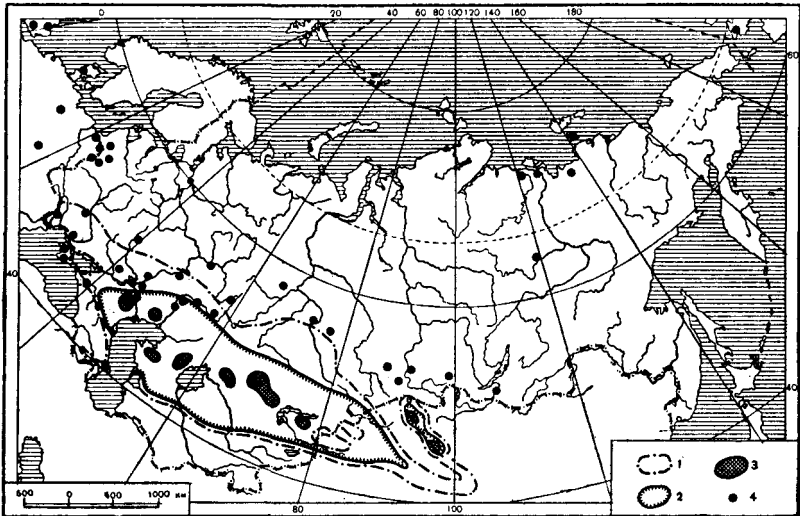
CONSERVATION

At this critical juncture, in 1919, a law was passed absolutely forbidding the hunting of the saiga. For the first decade after the passing of the law the saiga population did no more than remain fairly stable. This was due

to the very small number of saiga, the geographical isolation of the few scattered groups from each other, a succession of hard winters, and the large numbers of wolves. The latter probably increased as a result of reduced hunting by man during this unsettled period of Russian history. Nevertheless, the first stage in the saiga conservation programme had been successfully achieved, and this rare and interesting relic had been saved from extinction.

Then came the population explosion. By the 1940s the saiga population of Kazakhstan had risen to the level of 100 years earlier; in 1950 it was 750,000 and in 1960 it had reached 1,300,000 head. In Southern Russia too the spread of the saiga in area and in numbers was phenomenal—in 1958 there were an estimated 540,000 saiga west of the Volga. The saiga is now the most numerous wild ungulate in the U.S.S.R., with a population of between two and three millions on an area of about 2½ million square kilometres.

There are three main reasons for this tremendous increase in population,



MAP OF THE DISTRIBUTION OF THE SAIGA

1. The boundary of its area in the eighteenth century.
2. Its area to-day.
3. Its area in the 1930s.
4. Fossil Pleistocene remains.

viz. the law forbidding hunting; the extermination of wolves; and the natural fecundity and mobility of the saiga itself. The females reach sexual maturity quickly, mating at seven to eight months and producing young in May, when they are only a year old. Most of the mature females produce twins. Mortality of the young is not high, and in a favourable year the net population increase can be of the order of 60 to 80 per cent.

c

Of course, in some years droughts, diseases or severe winters cause heavy mortality. Adult males, exhausted after mating, are the main victims in the winters, and by the spring may form only 10 to 12 per cent of the population, and after severe winters only 3 to 5 per cent. However, this is not a serious matter, for the saiga is a polygamous social species and the surviving males collect harems of four or six or even as many as twenty females. Indeed, the male mortality in winter helps to improve the breeding stock, as only the strongest males survive.

The mobility of the saiga is also an important factor in this population increase, as it frequently enables the animal to escape the worst effects of local droughts or deep winter snow. General seasonal migrations also take place—to the south in the autumn, and to the north in the spring and summer.

MANAGEMENT

As early as 1950 (only about thirty years after the passing of the law designed to save the saiga from extinction) it had become obvious that the animal had completely re-established itself, and was even becoming a pest to agriculture and forestry in some areas. Although plywood "scarecrows" could be used to frighten the saiga away from the crops, some form of more positive control was clearly desirable, and it was thought that such control could take the form of organized game-cropping, i.e. hunting so as to harvest a regular annual crop of saiga meat and hides.

Accordingly, hunting licences were issued in European Russia in 1951 and in Kazakhstan in 1954. Hunting was first done in conventional ways such as by driving the saiga herds on to a line of guns, or by lying in wait for them at water holes. The hunting season is a short one, lasting only October and November, i.e. when the young of the year are independent, before mating starts, and when the animals are in their best condition. Despite the short hunting season and the limited numbers of hunters available, quite large numbers of saiga were in fact shot—about 200,000 in five years west of the Volga, and about 5,000 in Kazakhstan in 1955–57. Even so, the conventional methods of hunting were unable to reach the cropping targets, which are set after careful calculations and may involve shooting more than 1,000 saiga a day. Also, organization and supervision were difficult.

To overcome these difficulties the Astrakhan *Okhotpromkhoz* (State Game-Cropping Enterprise) was set up to manage saiga hunting in the area west of the Volga. This organization has guards or wardens in the main towns and villages in the "saiga country", and these men keep a check on saiga numbers and movements, and stop poaching. Population counts are sometimes made by aeroplane, and sample checks are regularly made of the age and sex of the animals shot. The work of the wardens also includes the making of water holes, and the provision of fodder in severe winters.

To reach the cropping targets the Astrakhan *Okhotpromkhoz* has also developed a highly efficient method of mass hunting by night in lorries. Each team of hunters sets out in a lorry which carries searchlights. The light locates the saiga herd by their eyes from a distance as great as 2



From Professor A. G. Bannikov.

NEW-BORN SAIGA



From Professor A. G. Bannikov.

THE SAIGA



Photos : Mr. Nobuo Takai.

JAPANESE STORKS



Photos : June Bassett.

JAPANESE CRANES

kilometres. The lorry approaches to within 100 or 200 yards, and a powerful spotlight is switched on to the herd. Rapid selective shooting is then done with large-bore guns. In five or six hours a single team of hunters can kill 100 to 120 saiga. The animals are gutted on the spot, the carcasses loaded on to the lorry, and transported to the reception points. It should be stressed that this form of hunting is categorically forbidden except for the authorized *Okhotpromkhoz* teams.

The Astrakhan *Okhotpromkhoz* has "harvested" between 120,000 and 150,000 head per year since 1957. The saiga provides excellent meat (tasting rather like mutton), hides, fat, and horns (which are powdered for use in some pharmaceutical preparations). The annual yield of saiga meat in the U.S.S.R. is some 6,000 tons, and the annual yield of hides is about 20 million square decimetres (over 2 million sq. ft.).

The success of the Russians in this game conservation and harvesting scheme should provide both encouragement and pointers for other countries where the right conditions exist or can be created for game-cropping.

NOTE: This account is based on an article by Prof. A. G. Bannikov in the Russian journal *Priroda* 1962, No. 2, pp. 89-93. Other works consulted were N. A. Bobrinskii's book *Opredelitel' mlekopitayushchikh SSSR*, Moscow, 1944, pp. 245-246, and an article by N. N. Bakeev and A. N. Formozov in *Materialy po biogeografii SSSR*, Moscow, 1955, pp. 208-240.