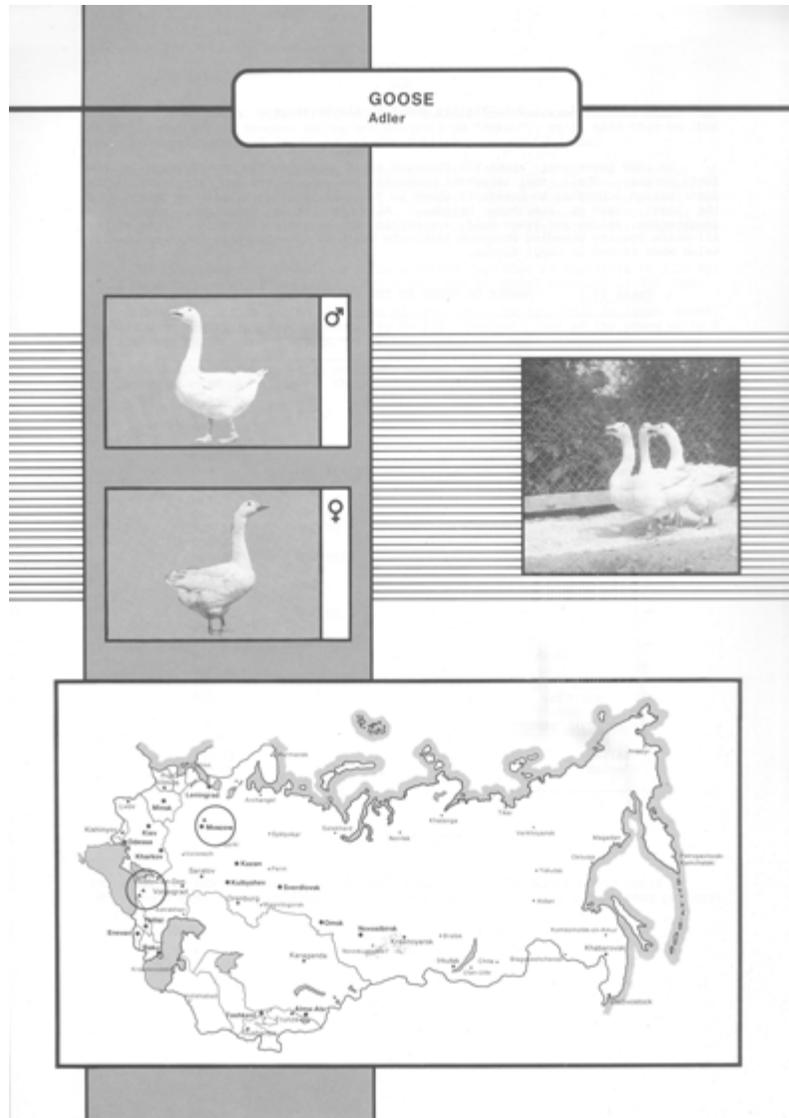

14. GEESE

V.I. Fisinin and K.V. Zlochevskaya

In 1980 there were about 824 thousand adult geese in the Soviet Union in the State sector. Their most important products are meat, down and fat liver. The distribution according to breeds is shown in Table 14.1. This article describes only the local, rare or vanishing breeds. All the breeds described, except the Javakhetian, Kaluga and Pskov Bald, are maintained in gene conservation flocks at the Ail-Union Poultry Breeding Research Institute which is investigating their commercial value when raised in small flocks.

Table 14.1 BREEDS OF GEESE IN THE SOVIET UNION

	Number (adults)	
	1974	1980
<u>LOCAL, RARE OR DECLINING BREEDS</u>		
Adler		few
Arzamas	3 700	few
Benkov		5 300
Chinese		239 000
Embden		919
Gorki	34 000	42 600
Javakhetian		few
Kaluga		few
Kholmogory	19 680	18 500
Kuban	20 500	82 300
Landes		6 000
Large Grey	196 000	314 200
Obroshino		4 300
Pereyaslav	2 100	1 500
Pskov Bald		few
Romny	38 500	24 500
Sebastopol		few
Shadrin	6 600	1 600
Solnechnogorsk		few
Toulouse		11 400
Vishtines		few
Vladimir Clay		230
<u>COMMERCIAL BREEDS</u>		
Italian		34 600
Rhenish		36 682



ADLER (Adlerskaya)

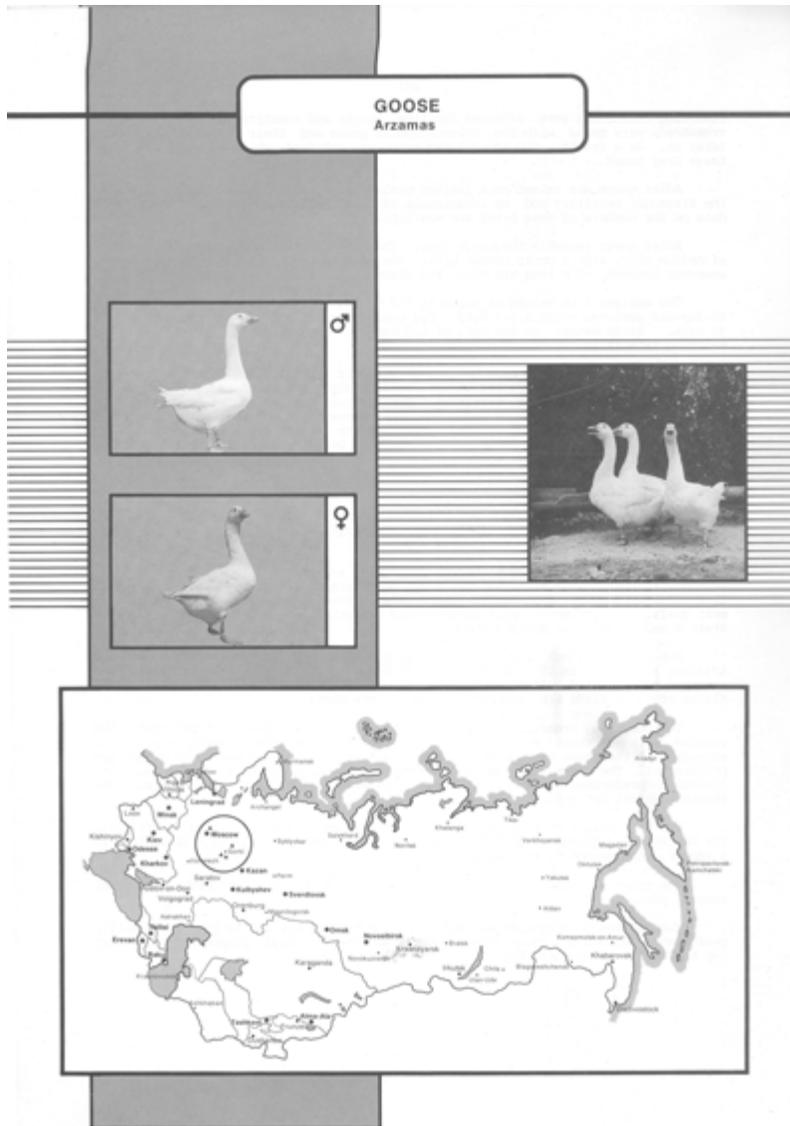
A breed group developed at the Adler poultry plant in Krasnodar territory by crossing small local geese with a high egg production with the Large Grey breed. The resulting crossbreeds were selected for live weight and constitution. In 1965 the crossbreeds were mated with the Solnechnogorsk geese and their offspring were bred inter se. As a result, the Adler breed group was obtained, which is similar to the Large Grey breed.

Adler geese are raised on a limited scale, mainly on the Adler poultry plant in the Krasnodar territory and by inhabitants of this and adjacent areas. No precise data on the numbers of this breed are available.

Adler geese resemble the Large Grey. The body is large and broad. The head is of medium size, with a short orange bill; the neck is short and the breast is broad, somewhat rounded. The legs are short and strong. The plumage is white.

The average live weight of males is 7-9 kg and that of females is 5-7 kg. The 60-day-old goslings weigh 3.9-4.0 kg. Egg production is 25-30 eggs; some geese lay 40 eggs. Birds mature at the age of 9.5 months. Egg weight is 160-170 g. The hatching rate is 40-50%.

Adler geese have good meat qualities but their fertility and hatching rate are not high enough - only 60-77 and 55-60% respectively. The breed is well adapted to the hot climate of Krasnodar territory. The survival rate of adults is 90-100% and that of the young is 75-85% depending on the management conditions. This explains both the limited distribution of Adler geese and the greater popularity of Large Grey geese which are raised on a large scale. Pedigree breeding of Adler geese is carried out on a small scale at Adler poultry plant.



ARZAMAS (Arzamasskaya)

This breed has been developed by prolonged selection of local geese in Gorki region. Initially, the selection was aimed at obtaining a fighting bird, with a high live weight and a strong constitution. Later, efforts were directed at improving meat qualities. For some years breeding and selection have been carried out at the State Breeding Farm for Arzamas geese. The breed was not popular. It was predominantly raised in the Gorki and adjacent regions. In 1974 there were 3700 birds. In 1980 no Arzamas geese were recorded on state and collective farms or other commercial plants. At present small flocks of these birds are raised mainly on private plots. The body is broad and deep, horizontally placed. The head is small and rounded, with a short straight bill. There are populations which are named, according to the shape of the bill, hook- and flat-billed. The breast is broad and protuberant. The legs are long and strong; the wings are well

developed. The plumage is predominantly white, although there are grey and pied individuals. The shanks and feet are yellow or orange.

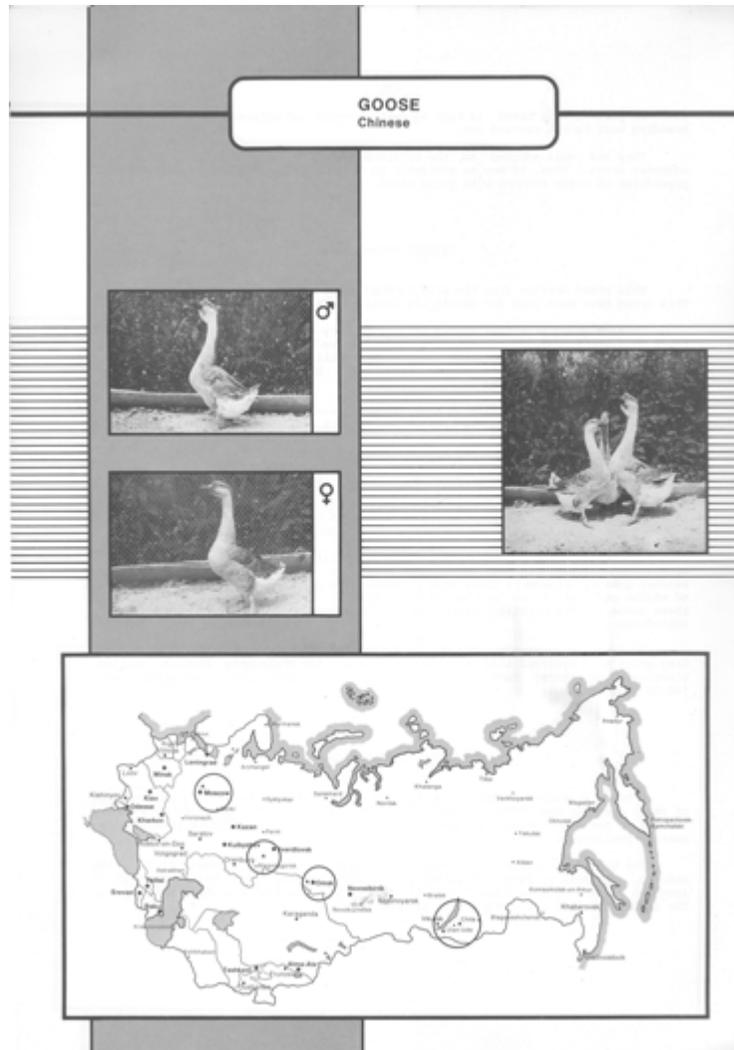
The live weight of adult birds is 6.0 kg for males and 5.0-5.5 kg for females. The 60-day-old goslings weigh 3.7-4.0 kg. The egg production is low - 18-20 eggs in 4 months. Egg weight is 165-180 g.

The geese are good brooders. The viability of the breed is high - survival rate of young is 96%.

The limited distribution and reduction in numbers are due to low reproductive performance including a relatively low egg production. A high proportion of females (up to 70-80%) brood their eggs.

At present this breed is kept in Gorki region and adjacent areas. Extensive breeding work is not carried out.

They are well adapted to the environmental conditions of Gorki region and adjacent areas. Thus, it may be advisable to extend their breeding by providing the population of these regions with young stock.



CHINESE (Kitaiskaya)

This breed derives from the wild knobbed geese (*Anser cygnoides*). The geese of this breed have been used for developing local breeds and breed groups in the USSR.

Chinese geese were once raised in this country on a very large scale. In 1980 there were about 239 000 Chinese Grey and Chinese White geese. At present their numbers have declined by more than 70%. Most poultry farms do not raise purebred Chinese geese but their crossbreds with other breeds which have higher meat qualities.

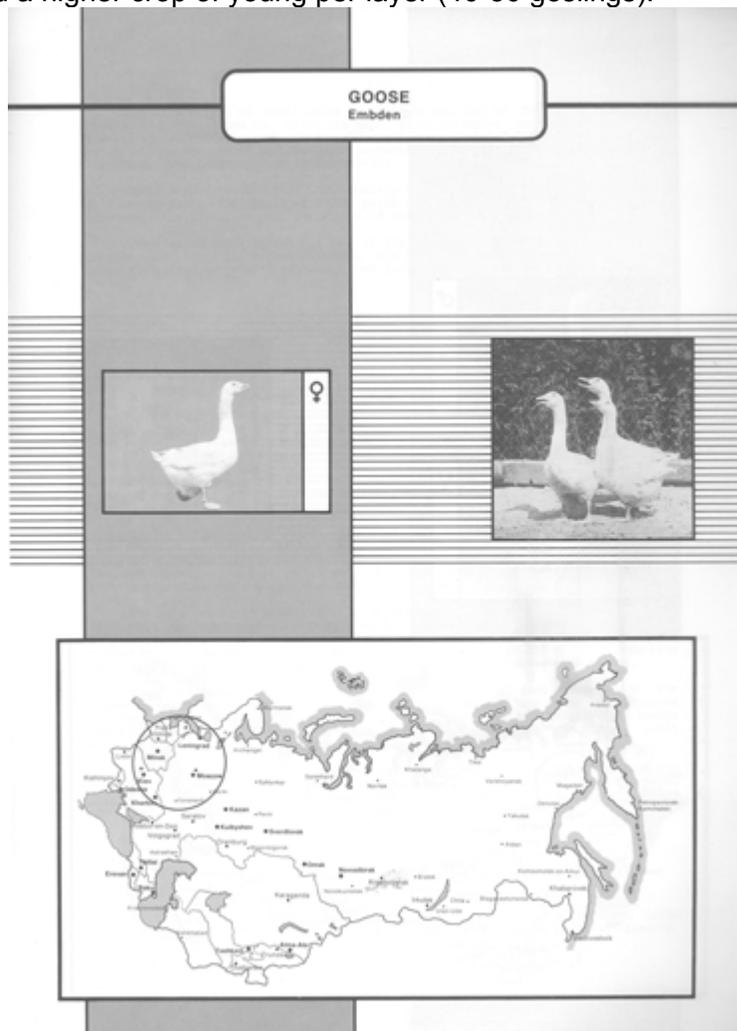
The head is large, with a knob on the forehead. The egg-shaped body is slightly raised; the breast is broad, and the neck is swan-like. The legs are of moderate length. In the Chinese Grey the back, wings and back of the neck are dark grey (greyish-brown) while breast and abdomen are pale. There is also a population of Chinese White geese, with white plumage. The shanks and feet are orange.

Egg production is 45-70 eggs per year with a maximum of 90-100 eggs. Egg weight is low - 140-150 g. Birds mature at the age of 9 months. The

hatching rate is sufficiently high - 70-75%. The live weight of adult birds is low; males weigh 50-55 kg and females 4.0-4.5 kg. The 60-day-old goslings weigh 3.0-3.2 kg.

The reproductive performance is good: fertility and hatchability are 90-95 and 80-85% respectively. Chinese Grey geese have slow weight gains when young and low carcass quality because of their grey plumage. The dressing percentage and the yield of edible parts are 56-60 and 56-57% respectively. For these reasons the number of these geese is now drastically reduced and new, more productive, breeds have been introduced.

Studies are currently under way to determine the efficiency of crossing Chinese Grey geese as a maternal line with heavier breeds: the Kholmogory, Rhenish, Italian, Vishtines, and others. Such crossing has produced a higher crop of young per layer (40-50 goslings).



EMBDEN (Emdenskaya)

A breed developed in Germany in the vicinity of Emden. There is a small number of these geese in the USSR. In 1980 there were 919 in Estonia and

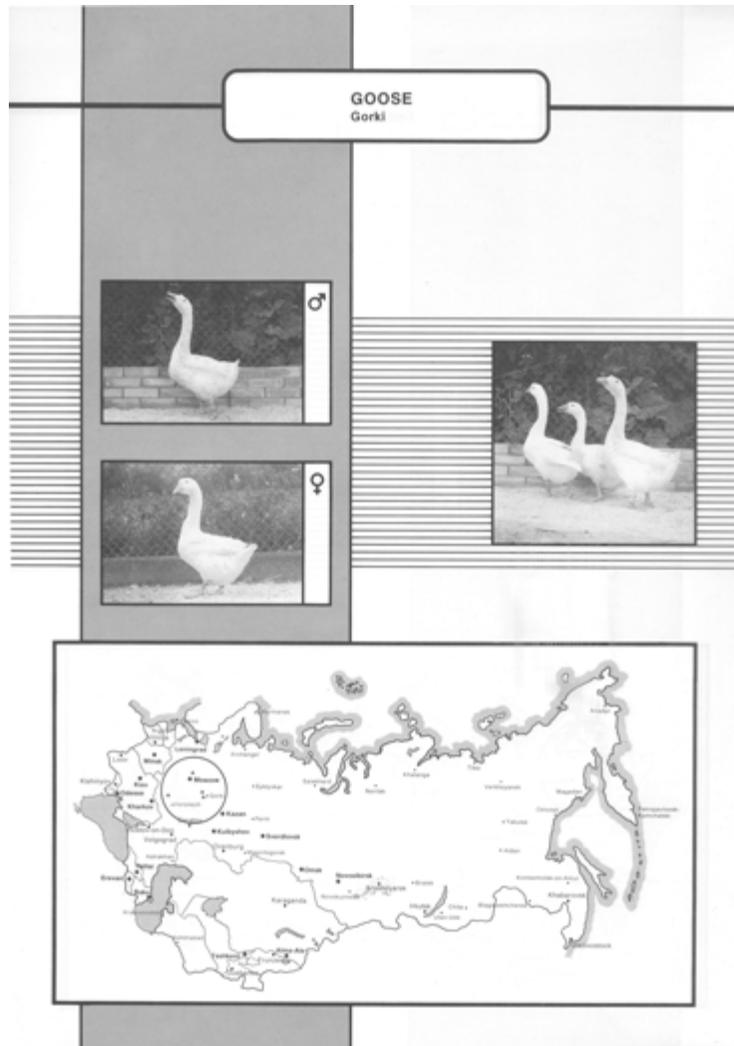
also very small numbers in the other Baltic republics and the Ukraine, kept on private plots and by amateur poultrymen.

The birds are large. The body is long and broad, with a small fold on the abdomen. The head is large and broad, with a short, broad, orange bill. The neck is long and curved, with a "purse" beneath the bill. The legs are short and strong. The shanks and feet are orange. The plumage is white.

The live weight of adult males is 9-10 kg and that of females is 8 kg. The figures are lower when the birds are kept under extensive conditions: 6.5-7 and 5.0-5.5 kg respectively. The 60-day-old goslings weigh 3.6-3.8 kg. The geese begin to lay at the age of 10 months; egg production is only 25-30 eggs; egg weight is 160-170 g. The hatching rate is only 40-45%.

It is a good meat breed; the quality of meat and fat is high and the birds gain weight fast. The yield of edible parts amounts to 68.8%. The geese are good brooders; the latter account for 45-47% of the female flock.

The limited distribution and use of the breed are due to its low reproductive performance: fertility and hatchability are 60-65 and 55-60% respectively. Embden geese are raised on private plots and used for crossing to obtain parental lines.



GORKI (Gorkovskaya)

A breed group obtained by crossing local geese of Gorki region with the Chinese breed. The crossbreds were mated with Solnechnogorsk geese and the three-way crosses were bred inter se. Local Gorki and Solnechnogorsk geese have good meat qualities, while the Chinese have better reproductive performance. This work has resulted in a breed group which considerably surpasses local Gorki geese in commercial value. Gorki geese are raised on a large scale in Gorki and many other regions of the Russian Federation.

In 1974 these geese numbered more than 34 000 birds and they reached 42 600 in 1980. At present numbers are smaller due to the introduction of more productive breeds, the Rhenish and Italian.

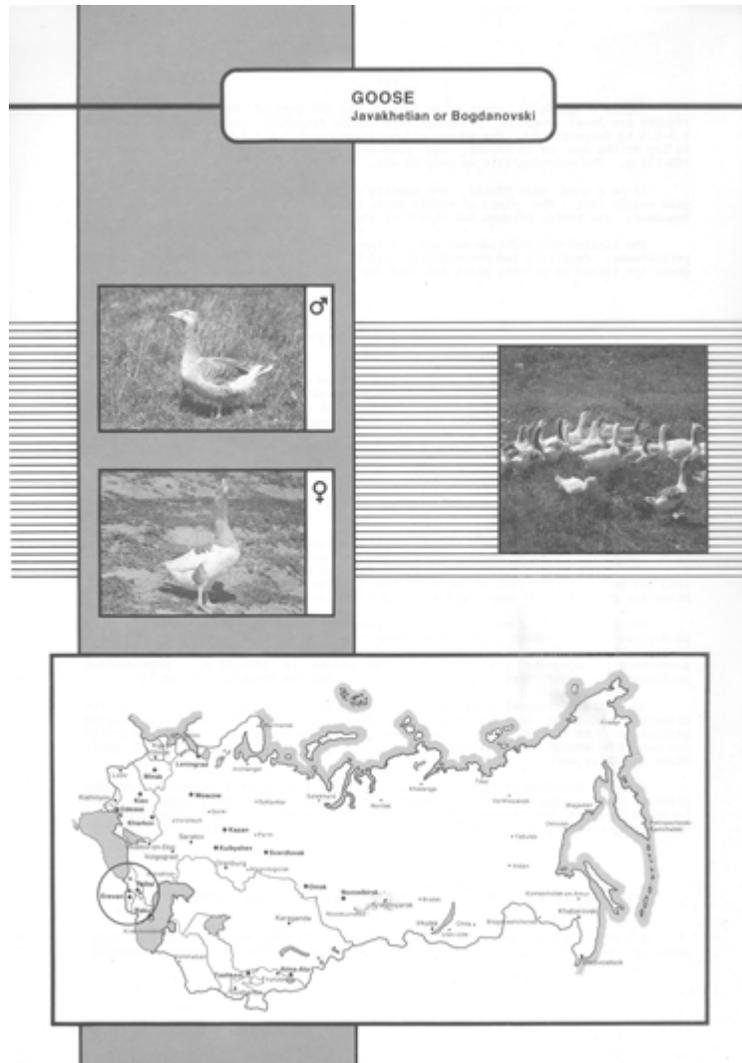
In constitution, size and colour Gorki geese resemble the Kholmogory. The head is medium-sized, with a small knob on the forehead. The body is long, broad, somewhat raised in front. The breast is protuberant but not very broad. The neck is long and curved; the tail is raised. The plumage is grey,

white or pied. Most birds are predominantly grey. The shanks and feet are orange.

The live weight of males is 7-7.5 kg and that of females is 5.5-6.0 kg. The 60-day-old goslings weigh 3.2-3.5 kg. There is a group of Gorki geese that reach the live weight of 3.8 kg at this age. Birds mature at the age of 240 days. Egg production is adequate - 50-60 eggs. Egg weight is 140-150 g. Reproductive performance is high: fertility of eggs is 80-90% and the hatching rate is 70%.

Among the biological properties one should single out good adaptation to the climatic conditions of the Gorki and adjacent regions and high reproductive performance. At the same time the weight gains of the young in the first two months are not high enough. The survival rate of the young is 80-85% and that of adult birds is 90% or more.

Pedigree breeding of this breed group is carried out at Burevestnik breeding plant in Gorki region and at Lindovskaya poultry plant. The breed group is being improved in order to obtain a maternal line. Crossbreds with high production are obtained by crossing Gorki geese with local breeds of low productivity.



JAVAKHETIAN or BOGDANOVSKI (Dzhavakhetskaya or Bogdanovskaya)

A local breed of geese in Georgia. Previously, they were raised on a large scale in Bogdanovski and other districts of Georgia and adjacent areas of Armenia.

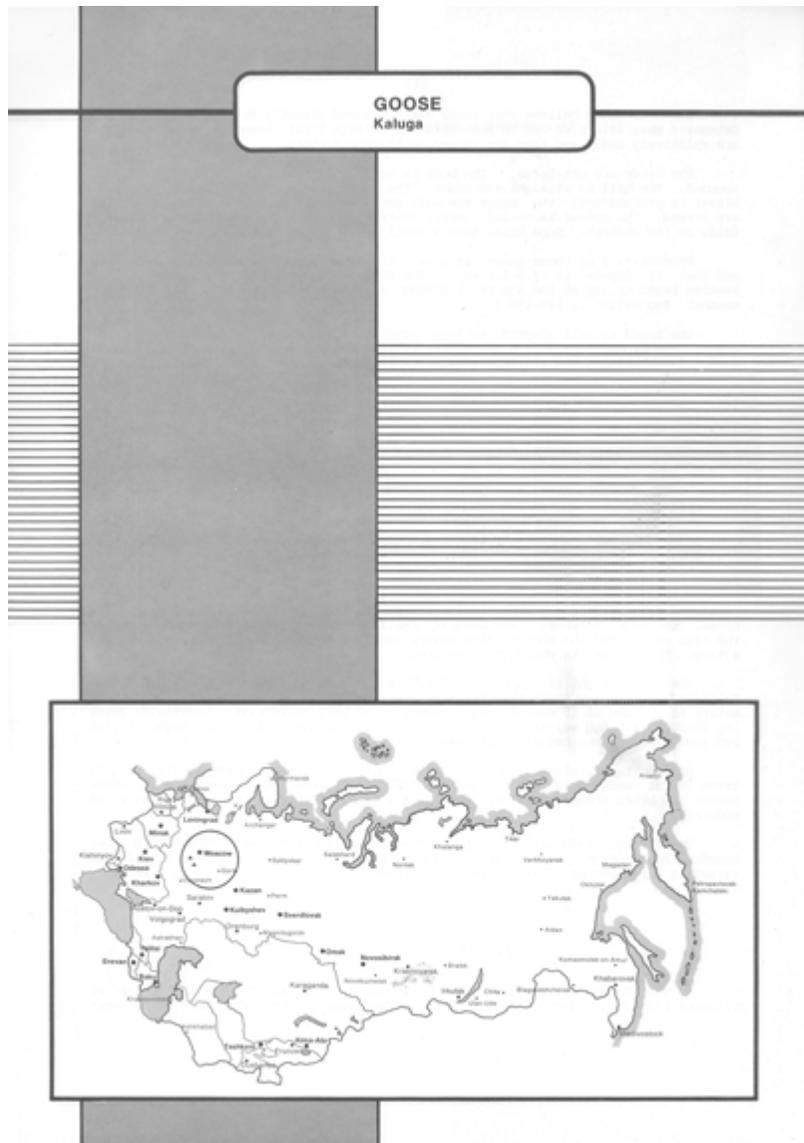
There are reasons to believe that these geese descend directly from local wild birds. Extensive mass selection led to the emergence of this local breed group. The flocks are relatively small and they are raised on household plots.

The birds are not large. The body is long and broad. The head is small and rounded. The bill is straight and short. The neck is also straight and short. The breast is protuberant; the wings are well developed, close to the body. The legs are strong. The colour is varied: grey, white, or pied. There are one or two skin folds on the abdomen. Some birds have a small crest on the head.

Productivity of these geese is poor. The live weight of males is 4.5-5.0 kg and that of females is 3.8-4.0 kg. The 60-day-old goslings weigh 2.9-3.0 kg. Females begin to lay at the age of 11 months and the egg-laying period lasts 3.0-3.5 months. Egg weight is 140-150 g.

The breed is well adapted to local conditions in Georgia, i.e. to mountainous areas. The brooding rate is high, almost 100%. The survival rate of adult birds is good. Javakhetian geese are less productive than other breeds and therefore are not very popular.

These geese are useful as a genetic resource for producing new, more productive populations well adapted to local conditions in Georgia.



KALUGA (Kaluzhskaya)

A breed group obtained by crossing local geese with local Tula birds of the fighting type which have well-developed muscles and a compact conformation. Kaluga geese have long been raised on private plots in the Kaluga region and in some districts of the Tula region. Currently numbers are insignificant.

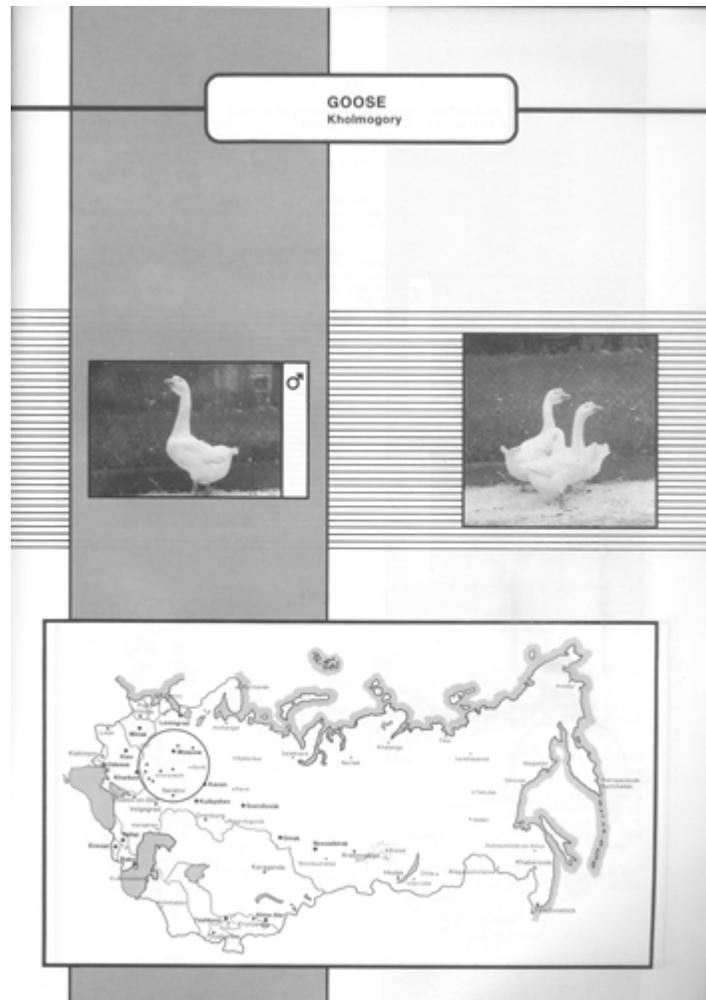
The body is compact, with the wings close to the body. The back and breast are broad. The neck is short; the head is small and the bill is straight and orange. The legs are strong and short; the shanks and feet are orange. The birds are very active. The plumage is white, grey or pied.

The live weight of males is 6.0-6.5 kg and that of females is 5.5-5.8 kg. Males and females may reach the higher live weight of 8 and 7 kg respectively. Birds mature at the age of 10 months. Egg production is only 15-18 eggs. Individual geese lay 25-30 eggs. Egg weight is 160-180.

Fertility and hatchability are high. During pedigree breeding the hatching rate reached 90%.

An important biological feature of the breed is its good meat qualities. In terms of fat content in the dry meat matter (58.2%) the geese surpass many other breeds and breed groups. Kaluga geese have a high viability; the brooding rate is moderate.

The low egg production of Kaluga geese has led to their replacement with other breeds. At the same time this breed group is a useful genetic resource. They can be raised as purebreds or crossed with other breeds.



KHOLMOGORY (Kholmogorskaya)

It was formed in the Central Black-Earth zone of the Russian Federation by crossing local white geese with Chinese; it is suggested that Tula Game geese were used in the crossing. Long-term pure breeding, improved feeding and management have resulted in the national breed. The breeding work is carried out by the Ail-Union Poultry Breeding Research Institute. The breed was widely spread over Kursk, Belgorod, Voronezh, Moscow, Vladimir, Arkhangel and other regions.

In 1974 there were 19 680 geese of this breed. Their number decreased slightly, to 18 500, by 1980. At present the population is still declining slowly. They are generally used on non-specialized poultry farms and private plots.

The Kholmogory goose's body is massive (long, deep and broad) and horizontal. The head is elongated with a knob on the forehead; the breast is broad and bulging; the beak is straight, long and orange-red in colour; the neck is long, slightly curved and with a purse. The knob on the forehead appears at the age of 6 or 7 months. There is a fold on the abdomen. The wings are strong, well developed, close to the body. The legs are of medium

length and strong; the shanks and feet are red or orange. The plumage is grey, white or pied.

The live weight of adult males is high, 7-8 kg, and that of females is 5.5-6.0 kg. Under optimal conditions the live weight of males reaches 9-10 kg and that of females 7 kg. By 60 days of age goslings reach the rather high live weight of 3.0-3.5 kg, the feed consumption being 3.8-4.0 kg per kg of gain. Egg production is 25-30 eggs weighing 170-180 g each. Fertility and hatchability are 80 and 50% respectively.

Kholmogory geese are very hardy and have a calm disposition; they quickly acclimatize to local conditions. Meat qualities are good. The crossbred progeny of Kholmogory males and Chinese White females produced 69% of edible parts. It is feasible to raise Kholmogory geese on private plots.

The reduction in numbers of these geese and their removal from commercial farms are due to the introduction of more productive breeds.

Kholmogory geese have a low egg production and hatchability; the resulting crop is only 12-13 goslings per layer.