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Chingis Tarabaev - Karakurt (spider genus *Latrodectus*) in Kazachstan: distribution and problem of victim registration

par
Chingis Tarabaev

1. INTRODUCTION

Since the development of medical parasitology at the end of the last century and at the beginning of the current one, the spiders of genus *Latrodectus* ("karakurt" in Turcic languages) had drawn the particular attention of scientists. Within the USSR territory karakurt has been studied especially thoroughly by ROSSIKOV (1898, 1904), PAVLOVSKY (1931, 1942), PAVLOVSKY GIZHITSKY (1935), MARIKOVSKY (1956).
At the beginning of our century, in the times of nomadic life of Kazakhs, Kirghizians and other people of Soviet Middle Asia, large scaled karakurt's bites of people and cattle have occured. Thus, according to ROSSIKOV (1898), in the little Kazalinsk District near Aral Sea in 1896 there were 349 people bitten by karakurt (11 of them died) and 1035 domestic animals bitter with 340 mortal cases. In western Kazachstan the number of bitten people in the same year had reached 1.000 with more than 100 mortal cases. Often people had to migrate from rich pasture territories for reasons of the high density of karakurt there. During nomadic life one was forced to take care of oneself, so the people knew karakurt very well.
Since the development of civilization the life of people inhabiting Middle-Asian and Kazachstan region have changed considerably. Medicine gradually took the care of people's health. However, information about karakurt damage had become more and more poor and practically faded away since the thirties, when Professor MARIKOVSKY began the investigations of karakurt's biology. But nobody carried out any registration or thorough work on discovery of karakurt bites of people and cattle within the USSR territory. One could think that rapid urbanization of environment could have caused the decrease of karakurt's abundance and damage. But such a view is far from reality.

2. RESULTS

The investigations we carried out during the last 5 years on karakurt's present condition, show that its abundance can localy be very high: in some points it approaches an average density of 1 specimen per 1 square metre. Besides, the places of high abundance are numerous enough and scattered over the whole distribution's area of karakurt. They are often situated just near people's settlements, so that karakurt is often in contact with people and cattle.

3. DISCUSSION

We have found the following explanation for the lack of information concuring the damages caused by the karakurt. Where the species is extremly abundant and where the possibility of people's being in contact with it is very high, we could not find any doctor or epidemiologist who knew karakurt or of its high abundance in the territory being inspected by him. It is obvious, that people and cattle are still rather frequently in contact with karakurt, but the cases in which people and cattle are poisoned by the last are wrongly diagnosticated by doctors and other specialists. Local inhabitants themselves seem to rely upon health services, they have little knowledge about

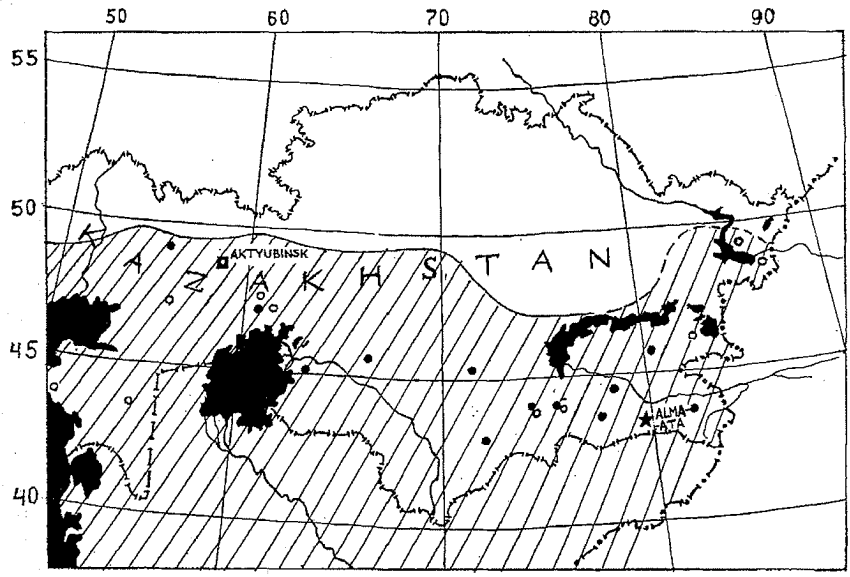

Fig. 1 - Distribution of karakurt over the territory of Kazakhstan
— - area borders after Marikovsky, 1956; --- - new borders after finds of 1988;
• - concentrating places known previously; o - concentrating places found in 1986-1990.

karakurt, and as a result, people are less careful. Despite our warning of danger in the Aktybinsk area, there have been many people and cattle bitten in 1989.

In the figure 1, the northern borders pass beyond the territory of Kazakhstan. Dotted border of karakurt North-East of Kazakhstan is established by us. Carrying out large-scale expeditions over the desert zone of Kazakhstan during the last 5 years, we have found the new karakurt concentrations designated by white circles in the figure 1. Concentrating places found by MARIKOVSKY (1956), are designated by black circles. It is important to know, that concentrations that were established by us have been constant since 1986 up to now. At the same time, we have become witness of the disappearance of at least one considerable concentration West of Alma-Ata, in Otar steppe, after the karakurt depression in 1985 caused by the late frosts when the temperature over the whole South-Eastern Kazachstan had fallen in May to -12-18°C: this led to the freezing of karakurt spiderlings (TARABAEV 1990). As a result, karakurt now occur only sporadically in the Otar steppe. At the same time, in the north-eastern part of karakurt's area we found two rather dense populations. However, these populations could have existed previously but nobody had discovered them before us.

4. CONCLUSION

On the base of views stated above one can make a conclusion about the necessity of a serious organization of the registration of damage cases caused by karakurt on people and cattle. The existence of reservations, i.e. the stabile place of extreme abundance makes it necessary to register them within the karakurt range and to carry out monitoring observations.

When organizing the registration of victims of karakurt (people and cattle), special instruction by health service specialist is required, especially in areas of high karakurt abundance.

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Chingis TARABAEV
Institute of Zoology Kazachstan Academy of Sciences,
Al-Farabi 65-3, CEI-480032 ALMA-ATA