

FATAL CASES OF CATTLE INTOXICATION DUE TO BITES OF BLACK FLIES *ODAGMIA ORNATA* (DIPTERA, SIMULIIDAE)

In the spring of 1967 severe cases of cattle intoxication resulting from mass bites of black flies *Odagmia ornata* (Meig.) were ascertained at the State farm Hněvanov in Šumava (district of Český Krumlov). Similar cases of affliction and deaths of cattle due to bites of black flies have been observed in the Danube basin during calamitous mass occurrence of the species *Simulium columbaczenze* Schönb. (Martini E., Lehrbuch der medizinischen Entomologie. Jena: 1-694, 1952, Živković V., Morfološka i ekološka ispitivanja simulida Dunava s naročitim osvrtom na golubačku mušicu. Beograd: 1-95, 1955 etc.)

In the second decade of May overwhelming hordes of black flies attacked cattle in pasture. The black flies confined their attentions largely to body parts with finer skin—around the eyes, ears, nostrils, dewlap, udder and the circumanal area. After several hours the symptoms of intoxication appeared. Swellings, disturbances of equilibrium, apathy and even disability of movement developed. During the next 12 hours two head died and within 40 hours eight head had to be slaughtered.

The autopsy of perished animals revealed extensive oedema under the neck and chest, cyanosis of udder and numerous tiny punctures in the udder and vulva, and severe pathological changes of internal organs: hyperemia of lungs, hemorrhage in the lungs, on endo- and epicardium, dystrophy of myocardium and liver, abomasitis catarrh. ac., hyperemia and inflammation of kidneys. The shock induced by intoxication resulting from insect bites was determined as the cause of death.

The affected cattle was treated by injections of calcium and coffeein to support the blood circulation and by penicillin in order to prevent inflammation. The swellings on udder were treated externally with Amastol and Aflegmin.

The treated animals with severe symptoms of poisoning recovered only gradually and one individual in the herd was observed to suffer from long-lasting consequences. In order to protect the cattle the animals were sprayed with Soldep, the pastures were fumigated and pasture time was changed. The black flies also inflicted severe bites to persons tending the cattle and in one case it was necessary to hospitalize a person for 14 days.

The breeding area of the black flies *O. ornata* was a paved stream flowing on the pasture land with grass growths reaching water. The mass hatching took place during a sudden spell of warm weather in the first decade of May, but the calamity was alleviated by a colder weather in the first decade of June. Developmental stages of less numerous autumnal generation of *O. ornata*, together with the less abundant species *Eusimulium latipes* (Meig.), *E. costatum* (Fried.) and *E. cryophilum* Rubtz. were identified in August.

The species *O. ornata* in mass numbers may induce severe affliction of cattle in pastures and affects even man. This is a species with a large area of distribution and in the territory of Czechoslovakia it occurs in most abundant numbers. The eruptions of this species are prompted by man's interference with natural conditions, when the streams are ameliorated and the biological equilibrium is thus disturbed. The intoxication induced by black flies demands further attention both from the veterinary and medical aspect.

J. MINÁŘ, Institute of Parasitology,
Czechoslovak Academy of Sciences, Prague
J. KUBEČ, District Veterinary Institution,
Český Krumlov