

Reptile Iridoviruses

Matos, A. P. Alves

Pathology Dept. Curry Cabral Hospital, Lisbon
D&E section, Zoology and Antropology Dept., Lisbon
Univ., Fac. of Sciences

The Iridoviridae family encompasses several vertebrate and invertebrate viruses characterised by large virions with icosahedric symmetry, a large (165-400 kbp) double-stranded linear DNA genome and cytoplasmic replication. The viruses with which this report is concerned where tentatively assigned to the Iridoviridae family on the grounds of the morphologic characteristics of the virions, since biochemical data are still not available. It should be kept in mind though that African swine fever virus, once classified in the Iridoviridae family because of its Iridovirus-like ultrastructure, was shown to have a replication strategy similar to the poxviruses, and is now regarded as belonging to a separate family.

The existence of purple-stained inclusions in the cytoplasm of reptile erythrocytes is known since 1914. These inclusions were thought to be protozoa belonging to a new genus viruses in Pirhemocyton. In 1966 Stehbins and Johnston reported the presence of Iridovirus-like viruses in Pirhemocyton inclusions of the Australian gecko *Gehyra variegata*. This first TEM study remained however unconfirmed during many years because of lack of further study, and many authors maintained the view of the protozoan nature of the inclusion.

In 1993 the viral nature of the Pirhemocyton was confirmed by Telford in African chameleons, and by Alves de Matos and Paperna in eight different species of reptiles. The viral nature of Pirhemocyton is therefore well documented now, and the generic name should be replaced by virologic designations such as lizard erythrocytic virus (LEV), as proposed by Telford. The viruses found in different species were always morphologically similar to iridoviruses, but differ in size and other details of the virion structure, and are probably different viruses.

In 1994 Alves de Matos et al. described LEVs in *Podarcis hispanica*, *Archaeolacerta monticola* and *Lacerta schreiberi* from Portugal and Spain. "Pirhemocyton" was described previously in Spain in *Tarentola mauritanica* (Wood, 1935). *L. schreiberi* infection could be transmitted experimentally by inoculation

of infected blood, allowing the ultrastructural study of virus morphogenesis. Half of the inoculated animals developed a lethal hepatic disease.

The high percentage of infected animals found in some captures, suggests that the virus may be a frequent parasite of lizards, but its pathogenic effects in wild animals remain to be determined. Its mode of transmission is also unknown, but arthropod vectors could play an important role, since iridoviruses are well known arthropods pathogens.

Conservation of the Iberian Rock Lizard (*Lacerta monticola*) in Serra da Estrela, Portugal

Moreira, P.; A. Almeida; F. Brito e Abreu; O. Paulo; H. Rosa & E. G. Crespo

Dep. de Zoologia e Antropologia, Fac. de Ciências, Univ. de Lisboa

In 1994 a study project has started on the population of the Iberian rock lizard of Serra da Estrela, Portugal (*Lacerta monticola monticola*, Boulenger 1905), where this subspecies is an exclusive endemism. The aims of the first year work were, among others, the determination of the population range distribution and its abundance.

The Central Plateau of Serra da Estrela has been intensively prospected in order to determine the accurate population range. For the estimation of relative abundances thirty UTM 1x1 Km squares have been sampled monthly, from June to September. The main habitats of the Plateau of Serra da Estrela were mapped. Species abundance was related to habitat and altitude. In areas representative of distinct habitats and relative abundances three study squares (50x50m, 40x40m and 25x25m) were installed, to determine population densities by capture-recapture methods.

The distribution of the Iberian rock lizard is roughly 52 Km², restricted to altitudes above 1400m. Important abundance variation occurs in the Plateau, related to altitude and habitat. The highest densities were observed on the top of the Plateau, where the habitats have high rock cover. Most of the population seems to be concentrated on the