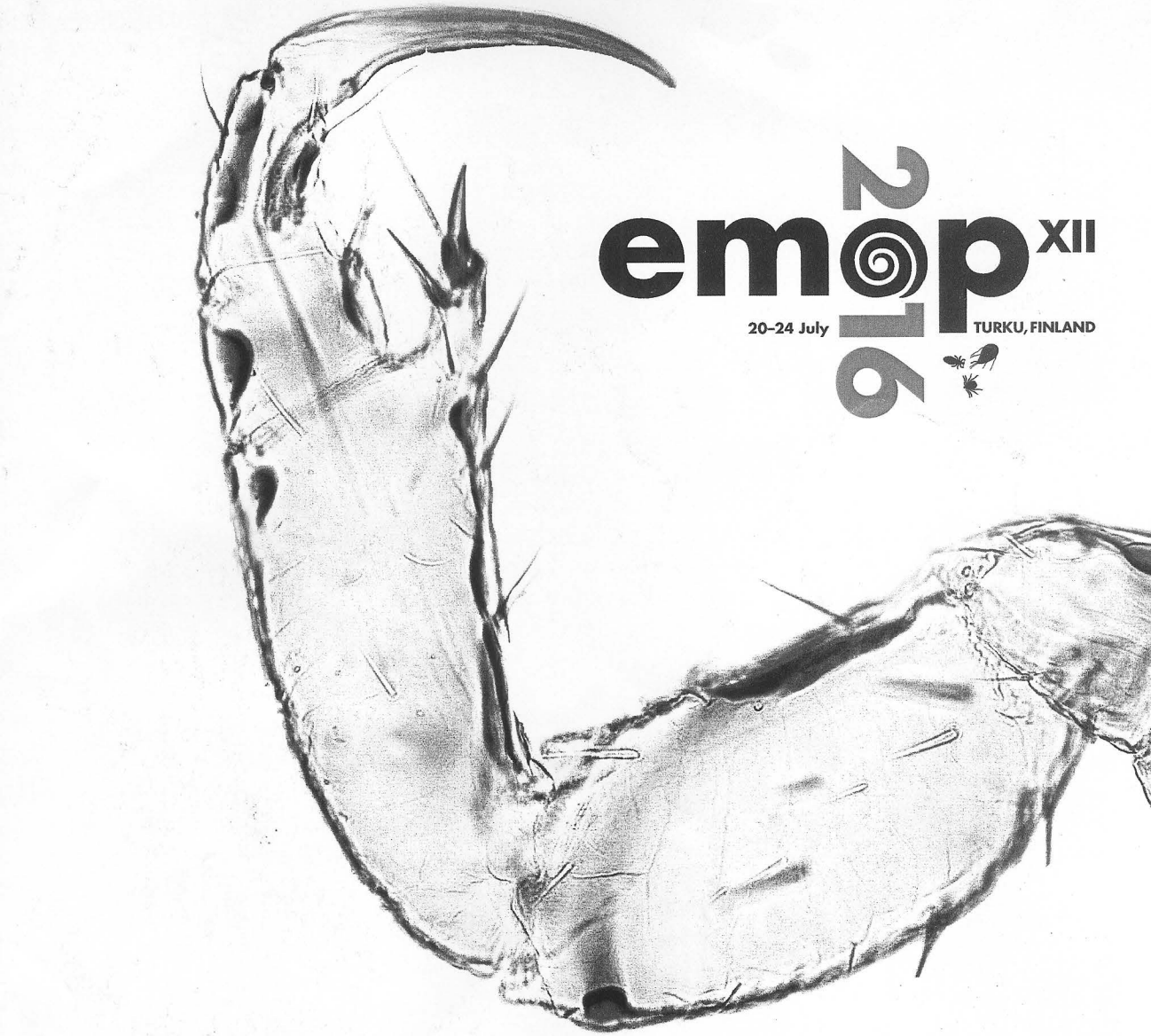
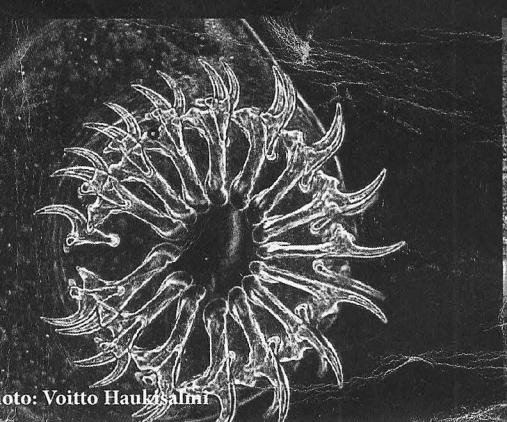
emop 2016 XII

20–24 July TURKU, FINLAND



Programme and General Info



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Hookworms Uncinaria lucasi in northern fur seal (Callorhinus ursinus) pups on St. Paul Island, Alaska: history, current state and future tendencies of host-parasite interactions

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Northern fur seals (Callorhinus ursinus) (NFS) are a threatened species which has declined since the 1950–60s. Hookworms (Uncinaria lucasi) were one of the main reasons of NFS pup mortality. Prevalence of U. lucasi in pups was 100% till the end of 1960s. Extensive research on the biology of U. lucasi carried out in the sinse 1950-60s revealed the prevalence of U. lucasi was 79% in 1955, 73% in 1960, 90% in 1978, <10% in 1999, 3% in 2001, and 6% in 2007 (Lyons et al., 2011). Dramatic decline in prevalence and intensity of hookworms in pups was reflected in a similar decrease in the number of young NFS males positive for parasitic larvae (L_3) in their blubber.

In subsequent years (2011−2013) monitoring studies of NFS pup infection with U.lucasi were performed on St. Paul Island. Totally, 98 dead pups were collected; 293 blubber samples (150 g each) were collected from NFS males humanely harvested during annual Aleut subsistent harvests. Prevalence of U. lucasi in pups varied: 4.9% in 2011, 0% in 2012 and 10.5% in 2013; intensity was from 1 to 13. Blubber examination revealed the prevalence of U. lucasi 3% in 2011 and 2.5% in 2013, with intensity from 1 to 11 larvae. Thus, despite low prevalence and intensity of U. lucasi, this parasite still has to be considered as a possible factor causing death of NFS pups. Possibly the current low prevalence is associated with the tremendous reduction in fur seal numbers on St. Paul Island.