SUMMARY

In order to clarify the mode of reproduction of the ear mites of the genus *Raillietia* which parasitize the ear canals of cattle, observations were made on the *in vitro* oviposition/larviposition. Dissecation of gravid females and microscopic examination of reproductive system were done as complementary observations. For the oviposition/larviposition observations, females collected from naturally infested cattle were kept at 30±1°C and 85-90% RH and observed at 30 minutes intervals until either oviposition or larviposition had ocurred. One group of 30 embryonated eggs and one group of 30 egss with a developed larva were futher observed for 48 hours at 12 hours intervals. The life cycle progressed only when larviposition had ocurred. These observations plus the presence of embryonated eggs and eggs with a full developed larva seen through microscopic examination of reproductive system and dissected females cleary show that the species of ear mites which parasitize cattle are ovoviparous.

KEY WORDS: *Raillietia*, Acari, reproduction, ovoviviparity.