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disease. This is supported in part by the absence of previous reports of coccidiodomycosis in peccaries, and the observa-

tion that only one of four infected females showed clinical signs in this study.

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Experimental Coccidiosis (*Isospora suis*) in a Litter of Feral Piglets

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Neonatal coccidiosis caused by *Isospora suis* is a serious problem in the swine production industry. Clinical signs of the disease consist of nonhemorrhagic diarrhea, weight loss, and dehydration in 5- to 14-day-old nursing piglets. Mortality is usually low to moderate. Microscopic lesions of villous atrophy, villous erosion and necrotizing enteritis have been reported from naturally and experimentally infected piglets (Stuart et al., 1980, *Vet. Pathol.* 17: 84-93; Eustis and Nelson, 1981, *Vet. Pathol.* 18: 21-28; Robinson et al., 1983, *Can. J. Comp. Med.* 47: 401-407). The present study was conducted to determine the responses of neonatal feral piglets to experimental infections of *I. suis*.

The feral sow and nursing piglets used in this study were the progeny of animals that were caught live on Ossabaw Island (Chatham County, Georgia). The population of swine on this island has perpetuated in a feral state for several hundred years (Brisbin et al., 1977, *In Research and Management of Wild Hog Populations*, G. W. Wood (ed.), B. W. Baruch Forest Science Institute of Clemson University, Georgetown, South Carolina, pp. 71-90).

Prior to farrowing and during lactation the sow was confined to a farrowing crate on an elevated plastisol-coated floor and

fed water and commercial sow ration ad libitum. The sow farrowed six piglets which were used for the experimental studies. On the day of birth, each piglet received an intramuscular injection of iron-dextran solution (Nonemic®, Burns-Biotec, Laboratories Division, Chromalloy Pharmaceutical, Inc., Omaha, Nebraska 68103, USA) and was ear-notched for identification. When 3 days old, each piglet was inoculated via a stomach tube with sporulated oocysts of *I. suis*. Two piglets received 15,000 oocysts (Nos. I and II), two piglets received 50,000 oocysts (Nos. III and IV), and two piglets received 100,000 oocysts (Nos. V and VI). Piglets were observed daily for clinical signs of disease.

Six days postinoculation (PI), one piglet from each dosage group was killed by methoxyflurane anesthesia (Metofane®, Pitman-Moore, Inc., Washington Crossing, New Jersey 08560, USA). Sections of the upper and mid-jejunum, and lower ileum were removed, fixed in 10% neutral buffered formalin solution, and processed for histological examination. Mucosal smears were made from the mid-jejunum and examined for the presence of endogenous stages of *I. suis* (Lindsay et al., 1980, *J. Parasitol.* 66: 771-779) using Nomarski interference contrast microscopy.

Three days PI the piglets appeared somewhat inactive, but were otherwise

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normal. Diarrhea was first observed on day 4 PI in all six piglets, but appeared to be more severe in piglets III and VI. On days 5 through 8 PI, diarrhea was equally severe in piglets from all dosage groups. No deaths from coccidiosis occurred. The three living piglets recovered from the coccidial infections by 10 to 12 days PI and were returned to the breeding herd when they were weaned at 8 wk of age.

Mucosal smears from the mid-jejunum of the three piglets which were killed contained asexual stages, sexual stages, and oocysts characteristic of *I. suis* (Lindsay et al., 1980, op. cit.). Mild villous atrophy was observed in hematoxylin and eosin-stained tissue sections from the mid-jejunum of all three piglets examined. Mild villous atrophy was also observed in the ileum of the piglet that received 100,000 oocysts. No additional lesions were observed.

The present study demonstrates that feral piglets are susceptible to coccidiosis caused by *I. suis*, and their responses to experimental infections are similar to those of domesticated piglets. The absence of deaths and severe microscopic lesions was probably due to the low numbers of oocysts administered. Experimentally, inoculation with 400,000 oocysts of *I. suis* causes severe mortality and extensive tissue damage in nursing piglets (Stuart et al., 1980, op. cit.), whereas dosages of 3,000

to 100,000 usually do not cause mortality and result in less severe tissue damage (Robinson et al., 1983, op. cit.; Stuart et al., 1980, op. cit.).

We are unaware of any studies documenting the prevalence of coccidia from swine inhabiting Ossabaw Island. Greiner et al. (1982, J. Am. Vet. Med. Assoc. 181: 1275-1277) examined 251 free-ranging feral swine from several study areas in Florida and found 218 (87%) of the animals infected with coccidia. Oocysts of all the *Eimeria* spp. previously reported from domestic swine (Vetterling, 1966, Cornell Vet. 56: 155-166) were identified in these feral swine. Oocysts of *I. suis* were found in six (2%) of the samples. Greiner et al. (1982, op. cit.) indicated that because feral swine are trapped and sold at feeder pig sales that these animals could serve as a source of infection for domestic swine.

Coccidiosis in domesticated piglets is usually a disease resulting from the confinement of large numbers of animals. The rearing of feral swine in confinement could also produce an environment suitable for the development of neonatal coccidiosis. Coccidiosis should be considered in the differential diagnosis of neonatal diarrhea in these animals.

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Larval Cestodes (*Mesocestoides* sp.) in the Liver of the Island Night Lizard, *Xantusia riversiana*

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The genus *Mesocestoides* is composed of cyclophyllidean cestodes which reach sexual maturity in birds and mammals

(Schmidt and Roberts, 1981, Foundations of Parasitology, Mosby, St. Louis, Missouri, 795 pp.). The first intermediate host is an invertebrate, most likely a terrestrial arthropod in which the oncosphere develops into a cysticeroid. If the arthropod is

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