Brucellosis was first diagnosed serologically in domestic pigs in Queensland in 1936 (Sutherland 1950) and since then *Brucella suis* has been isolated on a number of occasions (Laws and Hall 1963). However, there is little information on brucellosis in feral pigs or other wildlife hosts, except in various bush rats in northern Queensland where *Br. suis* type 3 was isolated (Cook *et al* 1966). The following examinations were conducted on feral pigs as part of a continuing survey for infectious agents that are likely to be transmissible to other domestic animals and man.

Eleven feral pigs of various ages and of both sexes were trapped, shot and autopsied near Ayr in northern Queensland. All visceral organs were examined and the lymph nodes were incised. Abscesses up to 10mm in diameter were present in the mesenteric lymph node (1), omentum (2), liver (5) and spleen (3) of 9 pigs. Abscesses from 2 pigs were collected on ice and transported to the laboratory where they were plated onto sheep blood agar and MacConkey agar, and incubated at 37°C for 72 hours. *Br. suis* was isolated in pure culture from one (liver abscess). This latter specimen was also inoculated into a guinea pig when it was found that serum from the same pig gave a positive reaction to the Rose Bengal test. Serums from 6 of these 11 pigs together with 7 serums from 27 other feral pigs shot in the vicinity, gave positive reactions to the Rose Bengal plate test (Morgan *et al* 1969) using *Br. abortus* (Rose Bengal) antigen*. After 6 weeks, the guinea pig was sacrificed and its serum gave a positive reaction to the complement fixation test (> 1/80) and *Br. suis* was isolated from the liver, spleen and pooled body lymph nodes. The WHO Brucellosis centre at the Commonwealth Serum Laboratories, Parkville, Victoria typed the strain recovered from the liver abscess as *Br. suis* biotype 1.

Br. suis in feral pigs poses a potential threat to persons and domestic animals associated with them. Spink (1969) found that the highest number of reported cases of brucellosis in the United States was in meat-packing house employees and that these infections were primarily due to *Br. suis*. As the transfer of *Br. suis* between pigs is either oral or genital, domestic pigs kept in well fenced runs or in intensive sheds are unlikely to be at risk (Manthei and Deyoe 1970). Cattle grazing pastures occupied by infected feral pigs are likely to come in contact with *Br. suis*. Cotton *et al* (1938) and Elder (1946) found that when cattle negative to the agglutination test were kept for a considerable time in close contact with swine infected with *Br. suis*, it was not unusual for them to acquire temporary agglutination reactions. This could be one explanation for the occurrence of sporadic reactors (1% to 0.1% of animals tested) in some herds of cattle. However, it appears that cattle have considerable resistance to infection with *Br. suis* and seldom contract brucellosis from pigs as a result of natural exposure (Cotton *et al* 1938). Meyer (1966) found no literature reports incriminating *Br. suis* biotype 1 as a cause of bovine abortion.

The assistance of Mr. R. G. Holroyd, B.V.Sc., in the trapping of feral pigs and in the collection of serums is gratefully acknowledged.

*Commonwealth Serum Laboratories, Melbourne.

References

Cook, I., Campbell, R. W. and Barrow, G. (1966)—*Aust. vet. J.* **42:** 5:

Cotton, W. E., Buck, J. M. and Smith, H. E. (1938)—*Tech. Bull. U.S. Dep. Agric.* No. 629.

Elder, C. (1946)—*Bull. Mo. Agr. Exp. Sta.* No. 398.

Laws, L. and Hall, W. T. K. (1963)—*Qd J. agric. Sci.* **20:** 499.

Manthei, C. A. and Deyoe, B. L. (1970)—"Diseases of Swine" 3rd edn, The Iowa State University Press, Ames, Iowa.

Meyer, M. E. (1966)—*Proc. U.S. live Stk sanit. Ass.* p 129.

Morgan, W. J. B., MacKinnon, D. J., Lawson, J. R. and Cullen, G. A. (1969)—*Vet. Rec.* **85:** 636.

Spink, W. W. (1969)—*J. Am. vet. med. Ass.* **155:** 2091.

Sutherland, A. K. (1950)—*Qd agric. J.* **70:** 45.

J. H. NORTON, B.V.Sc.
Annette D. THOMAS, M.Sc.

Queensland Department of Primary Industries,
Animal Health Station,
P.O. Box 1085,
Townsville, Queensland, 4810.

15 March 1976