the pleural cavity were capable of or ever attempted to penetrate through the diaphragm into the peritoneal cavity, and by this route enter the portal system.

The stages of development parallel those of *S. japonicum* but there is a constant "lag" of 5-10 days in *S. mansoni.* Sexual maturity in *S. mansoni* is reached between the 35th and 40th day, although even in light infections only a fraction of the worms are mature and the females laying eggs before the 40th day. *Schistosoma japonicum,* when mature, has a predilection for the upper branches of the superior mesenteric vein (*i. e.,* arising from the jejunum and upper ileum). On the other hand, *S. mansoni* migrates into the lower branches of the superior mesenteric vein and the inferior mesenteric vein, to deposit eggs in the venules of the wall of the colon. In a monkey sacrificed on the 54th day mated worms were also found in numbers in the superior and middle hemorrhoidals and even in the inferior vena cava. Furthermore, eggs-laying pairs have on several occasions been found in sections of lung tissue (rats, rabbit, monkey).

Series of adult females were examined to determine the numbers of eggs *in utero.* There is usually only one egg present but in about 8% of 355 females studied 3 or more eggs were seen. However, evidence provided by egg counts of representative samplings of the bowel mucosa indicates that each female lays several tens of eggs *per diem,* although eggs evacuated in the feces account for only a small fraction of those laid, the remainder having infiltrated into the tissues of the bowel wall.

7177 P

Life History of Manson's Blood Fluke (Schistosoma mansoni). III. The Blood Picture in Schistosomiasis Mansoni.*

ERNEST CARROLL FAUST AND CHARLES A. JONES.

From the Department of Tropical Medicine, Tulane University, and the School of Tropical Medicine, San Juan, P. R.

The blood picture in experimental mammals infected with *S. mansoni* shows first a leukocytosis, paralleling the migration of the larvae through the lungs. This is followed by a gradually develop-

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ing leukopenia, with or without an eosinophilia, which, if present, is most pronounced about the end of the prepatent period. From about the 40th day there is an excess of euglobulin in the blood plasma. Moderate to late clinical cases usually give a positive precipitation test for serum globulin. The total erythrocyte counts are little altered in experimental and clinical cases, but there is definite evidence of regeneration of these cells, as indicated by a hyperplastic bone marrow and an increased reticulocyte count.

7178 P

Functional Capacities of Ovaries of New-born after Transplantation into Adult Ovariotomized Rats.*

CARROLL A. PFEIFFER. (Introduced by E. Witschi.)

From the Zoological Laboratory, State University of Iowa.

Smith and Engle[1] pointed out that in mice more than 10 days old, sexual maturity may be induced by hypophysis transplants, but at this early date 5 daily transplants are required. After the 17th day 2 or 3 daily transplants are sufficient. Hill[2] has shown that this age difference holds for injections of pregnancy urine. However, the ovary of the new-born rat responds neither to the amount required for the 15-20-day-old rat nor to a much higher dosage (Wiesner[3] and Pfeiffer, unpublished work). It remained to be tested how early the ovary of the new-born might mature if it were subjected to gonadotrophic hormones from the time of birth. This could be done by injections. However, if the ovaries are transplanted into an adult female at the time of castration, they will be supplied with a constant, or possibly a steadily increasing amount of anterior pituitary hormone.

Young, healthy, mature female rats whose cycles had been followed for some time previous to the operation were used for hosts. The ovaries were obtained from new-born young and one ovary was transplanted under the dorsal surface of each kidney of the host, on which bilateral ovariotomy was performed at the time of implanta-

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[1] Smith, P. E., and Engle, E. T., *Am. J. Anat.*, 1927, **40**, 159.

[2] Hill, Margaret, *J. Physiol.*, 1932, **75**, 44.

[3] Wiesner, B. P., *J. Physiol.*, 1932, **75**, 39P.