

DISCUSSION

A SEX DIFFERENCE ENCOUNTERED IN THE
TRANSPLANTATION OF A CARCINOMA
OF THE OVARY¹

A CARCINOMA of the ovary has been continued by subcutaneous transplantation since November 26, 1935.² During that time the tumor has been carried through twelve transfer generations. The first experiment consisted of implanting the tumor into one male and three females of the CBA strain—close relatives to the original mouse, which developed the neoplasm spontaneously. Two of the females and the male grew the implanted tissue progressively. In the second transfer generation eight females and four males of the same strain were inoculated with tissue from a mouse in the first experiment. Five of the females and all four of the males grew the tissue. Thus in the first two transfer generations seven out of eleven females grew the tissue, whereas all five of the males grew the implants they received from the same tumor. From the third through the twelfth transfer generations 162 additional mice of the CBA strain have been implanted. Of these 58 were females and 104 were males. One of the 58 female mice inoculated grew the tissue; all the 104 males grew the implant. The one female to grow the tissue occurred in the sixth transfer generation—the significance of which is still in doubt. Thus it appears that since the tissue has been established through two transfer generations it is now capable of growing only in the male mouse. A further genetic and endocrinological analysis of the observed sex difference will be forthcoming.

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A NEW SOURCE OF DIPHYLLOBOTH-
RIUM INFECTION

A COLLECTION of tapeworms from the intercostal muscles of *Natrix sipedon* taken near Ithaca, N. Y., on June 18, 1936, was given to the writer by Elmer E. Brown while at the University of Michigan Biological Station.

Recent examination of this material shows it to be a tangled mass of plerocercoids, eighteen in all. Seven complete specimens disengaged from the group range from 22 mm to 186 mm in length, with slit-like bothria which average 0.35 mm long and 0.113 mm wide. The broadest portion of the worms, at a distance of 0.437 mm behind the bothria, measures 1.312 mm. From this point they taper to a width of 0.612 mm at a

¹ From the Department of Anatomy, Yale University School of Medicine. Aided by grants from the International Cancer Research Foundation and the Anna Fuller Fund. Acknowledgment is made to the Fluid Research Fund of Yale University.

² "Endocrinology" (in press).

distance of 0.35 mm from the posterior end. They have all the appearance of plerocercoids belonging to the genus *Diphyllbothrium*. This I believe to be the first record of a sparganum in snakes in the United States and I designate it as *Sparganum browni* n. sp.

Stiles¹ reported *Sparganum proliferum* from a man in Florida, and Moore² records *Sparganum mansonii* from a human case in Texas. Faust³ found *Natrix tigrina* in the Orient harbored *S. mansonii*. Li,⁴ in China, demonstrated other spargana in frogs and snakes to be the plerocercoids of *Diphyllbothrium erinacea* and *D. decipiens*. Recently, Mueller⁵ has described *D. mansonoides* from cats in New York state.

Since *Natrix sipedon* is a great fish eater, a systematic examination of this snake and small fish from streams in the vicinity of Ithaca and Syracuse, N. Y., might disclose the source of the infection of water snakes with this sparganum. Live plerocercoids from such a source fed to cats may prove it to be *Diphyllbothrium mansonoides*, *D. mansonii* or a new species.

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THE EFFECT OF LIGHT ON THE VITAMIN
C OF MILK

THE interesting article on vitamin C in pasteurized milk by Professor Sharp¹ prompts me to describe here very briefly the results of the work on the vitamin C of milk which has been carried out at our institute during the last few years. A full account of the work² will appear in the last number of the current volume of the *Biochemical Journal*. I think, however, that a summary of the salient points will not be amiss here, because I believe that our observations provide a satisfactory explanation of several problems raised by Professor Sharp. They are also, I hope, of general interest.

In estimating vitamin C chemically in milk by the method of Birch, Harris and Ray,³ I⁴ observed very marked fluctuations in the concentration of that vitamin from day to day. The possible causes of this phenomenon were investigated by Mattick and myself,⁵ who ultimately found that milk which originally gave a positive vitamin C titration failed to reduce the indophenol reagent after a short exposure to light in

¹ C. W. Stiles, *U. S. Hyg. Lab. Bull.*, 40: 1-18, 1908.

² J. T. Moore, *Amer. Jour. Trop. Diseases*, 2: 518-525, 1915.

³ E. C. Faust, "Human Helminthology," 1929.

⁴ H. C. Li, *Amer. Jour. Hyg.*, 10 (3): 527-550, 1929.

⁵ J. F. Mueller, *Jour. Parasit.*, 21 (2): 114-121, 1935 and 22 (5): 471-478, 1936.

¹ SCIENCE, 84: 461, 1936.

² By S. K. Kon and M. B. Watson.

³ *Biochem. Jour.*, 27: 59, 1933.

⁴ S. K. Kon, *Nature*, 132: 64, 1933.

⁵ *Nature*, 132: 446, 1933.