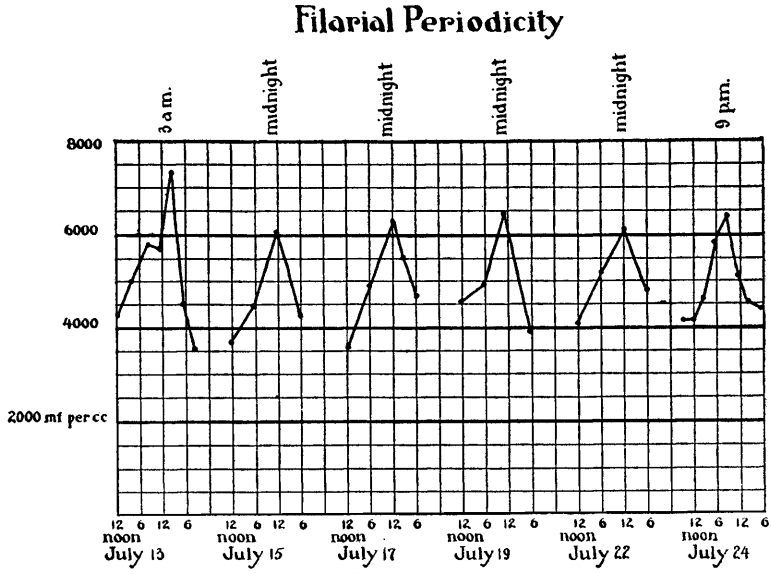

GRAPH 2.

although the daily maximum has been moved forward about 6 hours. However, they do confirm the statement that alteration of daily routine exerts an influence on periodicity.

8437 P

Toxicity of Nembutal for Guinea Pigs.

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The purpose of this investigation was to determine the average lethal dose of nembutal for guinea pigs, that is, the dose which kills 50% of a large group of the animals. All animals used on these experiments were normal and well fed. They were used only once.

The drug was injected intraperitoneally into 510 guinea pigs. The animals were divided into 4 weight-groups and the doses per kilo body weight of guinea pigs varied by 2.5 mg. increments from 42.5 to 67.5 mg. Table I summarizes the results.

The weights of the guinea pigs greatly influenced both the duration of sleep for those animals that recovered and the toxicity for

TABLE I.

Guinea pigs Weight-groups gm.	No. animals used	Dose per kilo mg.	Average lethal dose mg.
200-299	178	47.5-67.5	57.5-60
300-399	158	45 -65	57.5-60
400-599	130	42.5-60	52.5-55
600-799	44	45 -60	45 -47.5

those that died, less of the drug per kilo body weight being required for both of these effects with the heavier animals than with the smaller pigs.

8438 C

Nutritional Value for Planarian Worms of Vitamin Depleted Mammalian Tissues.*

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The planarian worm has proved itself a useful instrument for demonstrating changes in the composition of mammalian tissues resulting from changing conditions in the animal as a whole. (Bahrs.[1]) This research was undertaken to ascertain what the planarian worm could reveal as to modification of the nutritional value of tissues derived from animals fed diets with and without the recognized vitamins.

Guinea pigs and white rats were used to furnish the tissues. The animals received standard basal diets for a month or more. (For diets used, see Table I.) When definite signs of vitamin A deficiency and polyneuritis were apparent in the respective groups of rats, the planarian worm experiments were started. Guinea pigs showed definite signs of scurvy before their tissues were used in the planarian worm experiments. The guinea pigs maintained upon the vitamin D-free diet, of course, appeared entirely normal when their tissues served for the planarian worm diets.

Each group of planarian worms (probably *Planaria agilis*) consisted of 30 newly regenerated worms, all of the same length. Experimental groups were kept in finger bowls of heat-sterilized river

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1 Bahrs, Alice M., *Physiol. Zool.*, 1931, **4**, 189.