

curies for new fission products in Tables 1 to 6 in the same number of *Science* (pp. 700-704). In all cases the use of the new unit would give more awkward numerical expressions. The claim that the new unit is chosen so small as to avoid confusion with the curie is not an appealing one.

Finally, let me disclaim any disinclination to honor Lord Rutherford. No one could be more worthy of the highest honor in the field which he did most to create. But to name a new unit for him where one already exists seems to be superfluous and would spoil the term for future use. If there is to be a unit named for Rutherford, let it be one worthy of him.

The same authors further recommend a new unit, r.h.m. ("rum")—one roentgen per hour at one meter from the source for intensity of gamma radiation. The convenience of such a unit is something for radiologists to decide. Both questions should be referred to the appropriate international body of which the National Research Council is a member.

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#### Thyroid Adenomas in Rats Receiving Selenium

We have observed increased size, hyperplasia, and loss of colloid in the thyroid glands of 16 white rats which had received 0.05 to 0.1 per cent bis-4-acetamino-phenyl-selenium dihydroxide in their diet for 10 days. Eight white rats which had received 0.05 per cent of the selenium compound for 105 days had multiple adenomas of the thyroid glands and adenomatous hyperplasia of the liver. A detailed description of the experiments, complete pathological findings, and comparative effects of other organic and inorganic selenium compounds will appear elsewhere. Here it suffices to point out the goitrogenic action of the selenium analogue of a sulfur compound and its property of producing adenomatous changes in a relatively short time.

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#### Cestode "Parasitized" by Acanthocephalan

While engaged in a survey of the fisheries of Great Bear Lake, Northwest Territory, for the Fisheries Research Board of Canada, the writer observed that nearly all the lake trout, *Cristivomer namaycush* (Walbaum), were hosts to two intestinal parasites. One of these was the cestode, *Eubothrium salvelini* (Schränk), and the other the acanthocephalan, *Echinorhynchus salvelini* (Linton). Normally, both parasites were attached to the intestinal mucosa of the host, the tapeworms by their scolices and the acanthocephalans by their proboscides. A number of specimens of each were preserved for record and study. This winter an examination of the preserved tapeworms revealed that those from two different trout had some of the acanthocephalans firmly attached to their

bodies. One cestode had four of them. Each acanthocephalan had buried its proboscis to the full extent in the strobila of the tapeworm. Some were attached to the sides of the cestodes and others to the ventral and dorsal surfaces. The specimens attached to the tapeworms appear similar in every respect to those which were attached to the host's gut.

Since the proboscis of the Acanthocephala is, like the scolex of a tapeworm, solely an organ of attachment and not a means of gaining nourishment, this relationship is not truly parasitism. Although attached to the tapeworm, the acanthocephalan is still parasitic on the trout, as it is from the trout that the food supply is derived.

This association of parasite and parasite probably arose when some of the acanthocephalans, arriving in the intestine of a trout, found the attachment sites preoccupied by a large number of the tapeworms. In seeking to fix themselves, they imbedded their proboscides in the only available solid objects—the tapeworms.

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#### Antipurpuric Action of A-Tocopherol (Vitamin E)

Stilbestrol given intramuscularly and intravenously to four dogs in doses of 10-20 mg./day quickly produced increased capillary fragility, prolonged bleeding and clotting times, and reduced platelet counts. When this dosage was continued for 14-25 days, a true purpura developed. This could end in widespread, large and small subcutaneous and visceral hemorrhages, bleeding into the body cavities, or even hemorrhagic death. These observations had been made previously by Castrodale, *et al.* (1941), and by Tyslowitz and Dingemans (1941).

Giving these purpuric dogs testosterone propionate seemed not to be helpful; but administering synthetic  $\alpha$ -tocopherol acetate (ephynal-Hoffman-La Roche) in oral doses of 200 mg./day quickly cured the purpuric animals, restoring platelet counts and capillary fragility to normal. If given sooner, it prevented the appearance of the frank purpuras and the blood-vascular deficiencies.

The antipurpurogenic action of vitamin E has been demonstrated to be valid for human purpuras also. Five thrombocytopenic purpura patients, one of whom had not been helped by splenectomy, had platelet counts and capillary fragility quickly restored to normal or near normal on 200-400 mg. ephynal orally per day; their clinical evidences of purpura disappeared proportionately. There was a great clinical improvement in one man having terminal purpura and aplastic anemia associated with advanced lymphosarcoma, as well as in three women who bruised readily, suffered from menorrhagia and metrorrhagia, and showed slightly reduced platelet counts.

This effect of vitamin E at the above dosage appeared in 7-14 days, but it seems that the treatment must be continued for long periods of time, if not permanently.

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