solar rotation period of the northern sun-spot belt on the sun.

Evidently the active region on the sun's surface has persisted for more than seventy-five years.

It has been suspected for many years that there was a persistent region of high solar activity, but the apparent impossibility of the existence of such a region on a globe of incandescent gas and the difficulty of determining the rotation period of the hypothetical spot before daily sun-spot records were available rendered the acceptance of such a phenomenon very doubtful.

Professor C. A. Young, who in his book, "The Sun," page 148, has discussed the possibility that sun-spots appear repeatedly at the same point on the sun, concludes that "owing to the uncertainty of our knowledge of the true period of the sun's rotation the evidence is not sufficient to establish it. If it should be shown to be true hereafter, it would compel an entire revolution of the received view of the constitution of the sun."

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THE ANNELID WORM, POLYDORA, AS AN OYSTER PEST

WITH the aid of a grant from the American Association for the Advancement of Science through the South Carolina Academy of Science, a study is being made of one of the numerous pests to which the commercial oyster, *Ostrea virginica,* of the Atlantic Seaboard, is subject and whose activities result in considerable financial loss to oystermen.

This particular pest is a small annelid which causes a "mud blister" in the oyster. This is a small, irregular, often pear-shaped, blister of mud, formed on the surface of the inside of the valve. The oyster covers this daub of mud with a layer of nacre. Within the blister one finds the annelid, which has access to the outside through two tunnels opening along the edge of the shell. This worm has been identified by Dr. Olga Hartman as *Polydora ciliata* (Johnston). Although *Polydora* is well known, its occurrence in such abundance as to become an oyster pest seems as yet unreported in the United States.

The worm upsets the normal life of the oyster by restricting its living space and generally weakening it. Infested oysters, although not unfit for food, are not readily salable because of their unsightly appearance.

I have had these worms and the blister they cause under observation since 1935. Indications are that the worms were prevalent in South Carolina even in precolonial days. An examination of numerous samples of South Carolina oysters shows that approximately 30 per cent. of the oysters in the state are infested with *Polydora.* The important point of the present investigation is to discover the possible underlying causes of its prevalence and its possible increasing abundance, and to determine means for its control.

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ALFRED B. NOBEL AWARDS IN SCIENCE

THE Alfred B. Nobel Prizes in five activities have been awarded since 1901. The 1939 winners were recently announced. Comparative ratings of the different countries whose citizens have received these distinctions have been made at various times, but such comparisons usually have not taken into account the relative populations of the various countries. Such comparisons are manifestly unfair since they give too low a placement to those countries of small population and too high to those of large populations.

In order to present a fairer estimate of the different countries' attainments in the sciences—chemistry, medicine and physics—they are here figured on a population basis, and where the prize was awarded to more than one person, each has been counted as a unit rather than as a fraction. Since the awarding committee could make no distinction between the winners, it seems unfair to the laureates and to their respective countries to count them otherwise than as separate winners. Counted in this manner there have been 128 laureates in the sciences listed under 16 different countries. The only Hungarian winner (in medicine and physiology in 1937) has been included with Austria since they were in that country previous to the Versailles Treaty. India and Russia have not been placed in the tables since the former has had but one prize winner and the latter only two. India would be rated last in Tables I and III; Russia next to last in Table I and last in Table II (she has had no prize winner since 1908). Dr. Charles D. Snyder in an article entitled "The Real Winners in the 1936 Olympic Games"[1] set forth the results in the Olympic Games in this manner.

The ideal quota is obtained by finding the sums of

TABLE I

CLASSIFICATION OF NOBEL WINNERS IN THE SCIENCES (1901–39) FOR COUNTRIES BASED ON POPULATION

Country	Number of winners	Ideal quota	Per cent. attainment	Comparative rank	Date of last award
Switzerland	5	1.2	417	1	1939
Denmark	4	1	400	2	1926
Holland	9	2.6	346	3	1938
Sweden	6	2	300	4	1929
Germany	37	20	185	5	1939
Great Britain ..	21	12	175	6	1937
Austria	6	5	120	7	1937
France	15	13	115	8	1935
Canada	2	3	67	9	1923
Belgium	1	2.6	40	10	1919
United States ..	15	40	38	11	1939
Italy	3	13	23	12	1938
Spain	1	8	13	13	1906

[1] *Scientific Monthly,* 372, Oct., 1936.