have a boiling point of 107 to 110° C. and the drops will form in one or two minutes. If boiled to about 115° or 116° C., the drops will form very slowly, *i.e.*, requiring several hours, and will persist for hours or even days, for very small drops, before floating out to the surface of the syrup. Intermediate rates of formation of the drops may be obtained from syrup having boiling points at intermediate temperatures.

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BOTANY IN STATE NAMES

ANYTHING written by Dr. C. Stuart Gager, the versatile and distinguished director of the Brooklyn Botanic Garden, is worth reading, and the lead article in SCIENCE for April 23, "Botanic Gardens in Science and Education," is no exception. Erudite, thought-provoking, yet withal witty, entertaining and charming, it holds one's attention, from the opening tribute to Swarthmore to the concluding reference to 1st Corinthians. The inaccurate second sentence can only be explained as another illustration of the old adage, "et Jupiter nuat." Pennsylvania is definitely *not* "the only state of our union that has any reference to plant life in its name." How about Florida?, or Vermont? or Quonecktacut, river of pines? Moreover, some authorities say that Alabama is a corruption of Choctaw "alba aya mule," meaning, "I clear the thicket," and one of the etymologies of Oregon is from *Origanum,* referring to a native plant with a marjoram-like scent.

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THE MEANING OF STATE NAMES

I BELIEVE it was Will Rogers who said, "All I know is what I read in the papers." My knowledge of the origins of the names of the states in our union is of similar derivation. It seems to me the question hinges partly on the obviousness of the meaning and partly on the reliability and certainty of the authority consulted. The statement quoted from my Swarthmore address was that Pennsylvania "is the only state of our union that has any reference to plant life in its name." As supporting authorities I consulted: Gannett, Henry, "The Origin of Certain Place Names in the U. S.," *U. S. Geol. Survey Bull.* No. 197, 1902; Century Dictionary; Encyclopaedia Britannica. Mr. Dayton cites what he considers to be five exceptions to that statement:

Florida: Gannett says: "Named by Ponce de Leon 'the florid or flower land.' He chose this name for two reasons: First because the country presented a pleasant aspect [no definite reference to plants]; and, second, because he landed on the festival which the Spaniards call Pascua de flores, or Pascua Florida, 'feast of flowers,' which corresponds to Palm Sunday. The second reason is generally considered to have more weight." That is, the reference in the state's name is to a feast of the Catholic Church—only indirectly, if at all, to plant life. In view of the important part played by institutional religion in the lives of the Spanish explorers this second reason seems to me also more logical.

Vermont: I had always supposed the reference in this name was to mountains, not to plant life. It is the greenness of mountains that is referred to. What makes them green is not referred to in the state's name. Perhaps your correspondent would consider Red Sea to be also a reference to plant life, since the redness is due to the presence of one of the blue-green algae in the plankton. Does the name Blue Ridge also refer to plant life? If so, why not Red River?

Connecticut: Gannett says: "River and state. An Indian name, derived from Quonoktacut (Century Dictionary gives it Quonoktacat), meaning, according to some authorities, 'a river whose water is driven in waves by tides or winds.' Haines says, 'land on the long tidal river.' Other interpretations are, 'on long river,' 'long river,' and 'the long or without end river.'" So also the Century Dictionary. The World Almanac gives "river of pines," but cites no authority.

Alabama: Gannett says: "Named from an Indian tribe. There are several explanations of the meaning of the word. Gatchet gives 'burnt clearing' [reference to the absence of plants!]. Others say it means 'here we rest.' Haines, in his "American Indian," gives 'thicket clearers'" [reference to men who remove plants!]. Century Dictionary says, under Alibamu, "In the form Alibama . . . the name is first mentioned as that of a chief met by De Soto." Question: Was the chief already named when De Soto met him, or did the Spaniards give him his name?

Oregon: Century Dictionary says: "Jonathan Carver, in his 'Travels' (1763) named the River 'Oregon.' Possibly from Spanish *Orejon.* See *Orejones.*" Under *Orejones* we read that the early Spanish explorers applied that name to an Indian tribe who artificially distended the lobes of their ears. In the Spanish Dictionary the English meaning of *Oreja* is given as *auricle of the ear.* As to the state being named, as Dayton notes, "from *Origanum,* referring to a native plant with a marjoram-like scent," one would wish to know what that plant was. It must still be growing there if it was there during the years of Spanish exploration in sufficient quantity to suggest a name for the vast region that constituted the territory of Oregon (much greater than the area of the present state of that name). The genus *Origanum* is European, and is found in America only as an introduced plant. Question: Were the early explorers likely to have been

sufficiently conversant with the Latin names of plants to know that *Origanum* was the generic name of a plant whose popular name is marjoram? The Encyclopaedia Britannica says: "The name [Oregon], like the whole story [of Carver] may have been of Spanish or Indian origin, or it may have been purely fanciful. . . . There have been many ingenious but quite unsatisfactory efforts to explain the derivation of the word *Oregon*." That it refers, even indirectly, to a plant seems to me extremely remote.

C. STUART GAGER

THE INFLUENCE OF THE INSTARS OF HOST LARVAE ON THE SEX OF THE PROGENY OF TIPHIA POPILLIAVORA ROH.

STUDIES recently completed on the interrelation between the larval instars of the Japanese beetle (*Popillia japonica* Newm.) and its parasite, *Tiphia popilliavora* Roh., revealed that the female parasite has the ability to control the sex of her progeny at the time of host parasitization. The stimulus to which the female responds in controlling the sex of her progeny is definitely associated with the instar or size of host on which the eggs are placed.

There are three instars in the larval development of the Japanese beetle. Each instar is characterized by an average larval size which varies considerably from the average size of the larvae in the other two instars. The second-instar and third-instar larvae are accepted by the parasite for parasitization and development goes to completion on both of these hosts. The female parasite shows a decided preference for third-instar host larvae for parasitization; however, in the absence of third-instar host larvae, second-instar host larvae are readily accepted for parasitization. In a number of observations in which fertile female parasites were furnished both second-instar and third-instar host larvae simultaneously, second-instar or third-instar host larvae exclusively and second-instar and third-instar host larvae on alternate days, the resultant parasite progeny were predominantly males from the parasitized second-instar host larvae, while a normal sex ratio consisting of slightly more female than male parasites resulted from the parasitization of third-instar host larvae.

Definite proof that the female parasite has the ability to vary the sex of her progeny at the time of parasitization of the host larvae of different instars was obtained when parasite eggs placed by fertile females on second-instar host larvae were transferred to third-instar host larvae and eggs placed on third-instar host larvae were transferred to second-instar host larvae. The resultant parasite progeny were still predominantly males when parasite eggs were transferred from second-instar host larvae to the larger third-instar host larvae, while a normal ratio of males and females resulted when parasite eggs were transferred from third-instar host larvae to the smaller second-instar host larvae.

A detailed discussion of the data obtained in these studies is now in the course of preparation and will appear in entomological literature at some later date.

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THE ACTION OF P-AMINOPHENOL ON TISSUE OXIDATIONS

P-AMINOPHENOL in a concentration of M/5,000 inhibits the oxygen uptake of rat liver suspensions 50 per cent. This inhibition is constant over a period of three hours after which it begins to wear off. The inhibition manifests itself only in acid solutions such as pH 6.4 and 6.7. At pH 7.8 there is practically no effect. If larger concentrations of p-aminophenol are used the inhibition is masked by the oxidation of the substance to the quinone, which may then be reduced by the tissue and reoxidized. But in low concentrations this effect, if it does take place, is unimportant compared to the marked inhibition of the oxygen uptake. Aniline and phenol itself in two to four times the concentration produce under the same conditions inhibitions of only 5 to 20 per cent. Salicylic acid and acetanilide are also relatively ineffective. Other substituted phenols are also being tested and experiments are being done to determine what oxidizing systems are inhibited. It might be pointed out that under the same conditions it requires a concentration of M/500 cyanide to give the same percentage inhibition.

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A LARGE CATCH OF NOCTILUCA

THE large, spheroidal dinoflagellate, *Noctiluca scintillans* (Macartney) Kofoid and Swezy, has considerable general interest because it was one of the first organisms to be connected with the phenomenon of "phosphorescence" (luminescence) of sea water. Typical individuals (some reaching a diameter of one millimeter) are easily visible without magnification, and this fact may have been mainly responsible for the notice attracted by these organisms.

Apparently, the different writers commenting on prominence of *Noctiluca* have given no records of actual numbers found in a unit volume of water. On this account it may be worth noting that a density of more than three million individuals to a liter of water was found near Angel de la Guardia Island in the northern part of the Gulf of California on March 20, 1937.

The collections were made by Mr. Bruce M. Craw-