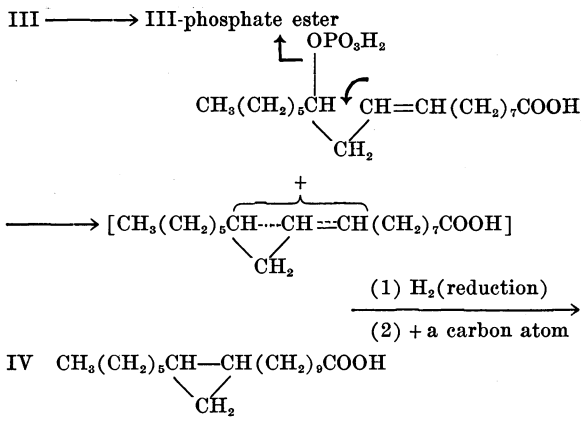
"i-sterol" effect for the formation of the cyclopropane ring in a manner parallel to the biosynthesis.



IV $CH_3(CH_2)_5CH(\diagdown CH_2\diagup)CH(CH_2)_9COOH$

Proof of this particular suggestion will depend on the validity of the structure IV proposed for the new fatty acid, but the general biosynthetic route outlined above may still be a reasonable hypothesis for the explanation of the formation of cyclopropane rings in natural products.

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Separation of Rusty Mottle of Cherry from a Ring-Spot–Rusty Mottle Complex[1]

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Most sweet and sour cherries carry the ring-spot virus in a more or less latent condition. This has caused considerable confusion in the study of cherry viruses on other species of *Prunus*. Often the symptoms described for the reaction on some specific host were not that of the original cherry virus but of the latent ring spot. In their work with mild rusty mottle virus, Zeller and Milbrath (*1*) reported the interference of the ring-spot virus in studying rusty mottle on peach. Whenever peach was inoculated with different sources of mild rusty mottle a reaction would occur which was typical of the ring-spot complex. At first this was believed to be a reaction of mild rusty mottle virus, since return inoculation from such peach trees always gave rusty mottle symptoms on cherry.

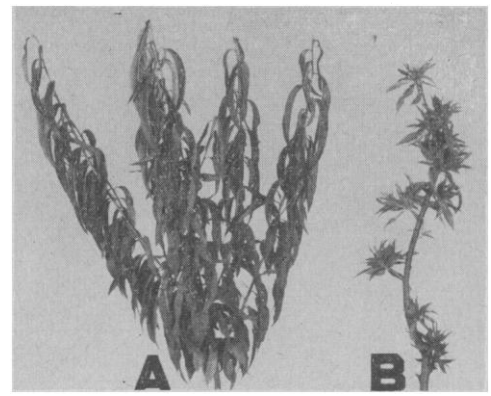

FIG. 1. Early Muir peach inoculated with: *A*, rusty mottle virus after removal of ring-spot complex; *B*, rusty mottle before removal of ring-spot complex.

From this work it became apparent that it would be valuable to have a method whereby the ring-spot virus could be separated from other stone fruit viruses. Since the ring-spot virus goes to most stone fruit varieties, separation on differential hosts based on susceptibility did not offer much promise. The local necrotic lesion type of reaction that occurs when ring-spot virus is budded into Shirofugen flowering cherry (*Prunus serrulata* var. Shirofugen) (*2, 3*) suggested a possible method of separation. If the ring-spot virus would move out more slowly than the second virus and remain somewhat localized in the inoculated branch, it would be possible to isolate the second virus beyond the region infected by ring spot.

In August three buds infected with ring spot and mild rusty mottle were placed near the terminal of a Shirofugen branch. By the following spring the inoculated branch showed severe gummosis and necrosis, indicating that the ring-spot virus had moved out into the Shirofugen. Buds were taken from several different branches not showing the ring-spot reaction and inoculated into Bing cherry. No symptoms of mild rusty mottle developed in the test tree, indicating the ring-spot virus had moved out of the infected bud, first killing a band of cells about the inoculation point and thus preventing the spread of the mild rusty mottle virus.

In order to avoid this direct exposure of Shirofugen tissue to the ring-spot virus before the mild rusty mottle virus had had an opportunity to move out into the Shirofugen, a second experiment was planned whereby both viruses would move through a non-necrotic host before coming in contact with Shirofugen. Ring-spot–free branches of Bing cherry were established on a 5-year-old Shirofugen tree. When these branches were 4–5 ft long, two cherry buds infected with both the ring-spot virus and mild rusty mottle virus were placed at the terminal portion of one of the

[1] Published as Technical paper No. 651 with the approval of the director of the Oregon Agricultural Experiment Station. Contribution from the Department of Botany and Plant Pathology.

Bing branches. These inoculations were made in August, and by the following April the ring-spot virus had moved out of the Bing branch, as evidenced by a streaking type of necrosis that involved about one third of the tree. The ring-spot virus had spread more rapidly and in a more systemic manner by this method of inoculation than by direct budding into the Shirofugen. The extent of the spread of the ring-spot virus was determined by slashing the bark and examining the exposed tissue for necrotic streaks.

Buds taken from the area showing necrotic streaking and placed into Shirofugen and Bing cherry showed both viruses to be present. At this time buds taken beyond this area contained neither virus.

In July the other Bing branches that had not been inoculated showed early rusty mottle symptoms, and the necrotic streaking caused by ring-spot virus had not yet reached the Shirofugen immediately below these branches. Buds transferred from these branches to virus-free Bing trees and Shirofugen demonstrated that the two viruses have been separated. Mild rusty mottle was established in a virus-free Bing without the ring-spot contaminate.

The successful separation of the mild rusty mottle virus from the ring-spot complex has made possible the study of the mild rusty mottle virus in peach. When Early Muir peach trees were inoculated with mild rusty mottle free from latent ring-spot virus, the results were entirely different from those of the original inoculations before the separation of the two viruses. The peach showed none of the severe shock reaction (Fig. 1, *B*) which is now known to be a symptom associated with certain strains of ring-spot virus. The mild rusty mottle virus was carried without apparent symptoms (Fig. 1, *A*). Return inoculation from peach to Bing cherry demonstrated the virus to be carried without symptoms in peach; the ring-spot virus may be carried without symptoms in cherry.

These findings emphasize the importance of recognizing ring-spot virus as a common contaminate in most stone fruit virus sources. Before these viruses can be studied as single entities, the ring-spot complex must be removed. The Shirofugen technique described offers a possible method of accomplishing the separation.

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Comments and Communications

The Problem of an International Language

IT STRIKES me that Ancel Keys is on thin ice when he rebukes the editor of *Acta Physiologica Polonica* for chauvinism in printing in Polish and not giving résumés in other languages—especially English!

What American journal—at least the biological ones I am familiar with—condescends to print foreign language résumés? None. How many American scientists really bother to learn other languages so that they are facile in them? Very few. And I am not innocent, either.

And what if the first issue is devoted to Pavlov? A great physiologist is entitled to an anniversary volume, it seems to me.

When Dr. Keys publishes a paper in Polish, or at least with a Polish résumé, then and not till then, do I think it proper for him (or anyone) to complain of chauvinism on someone else's part.

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IN transmitting his letter written to Professor W. Missiuro of the Akademia Lekarska in Warszawa, Poland, on the occasion of the publication of Volume I of *Acta Physiologica Polonica* (*Science,* **112**, 724 [1950]), Ancel Keys stated: "I, at least, am greatly disturbed to see such evidence of growing chauvinism in science in some parts of the world and feel we scientists should be alert to express such concern."

While one may regret the fact that only 20, or fewer, physiologists outside Poland and Russia can read articles in Polish, this seems to me no justifiable reason for denying the editors of the new journal the right to publish in the tongue most easily used by contributing authors. If allowed to use their natural tongue many writers will publish much of scientific value that would remain unpublished (and therefore totally inaccessible) if it had to be translated into English or German, as Dr. Keys has suggested. It is a much more difficult thing to write accurately and fluently in a tongue other than one's own than it is to garner meaningful data from an article already expressed with scientific exactness in a tongue not natural to the reader.

To require minority linguistic groups to publish in languages other than their own would be to handicap whole nations of scientists to the point of reducing productiveness. If Polish journals are to be required to publish English and German summaries, why should not all English-using journals be likewise required to publish summaries in two other languages for the benefit of the scientific public who do not easily read English?

Is not the very implied assumption that English-using journals be exempt from the need to translate