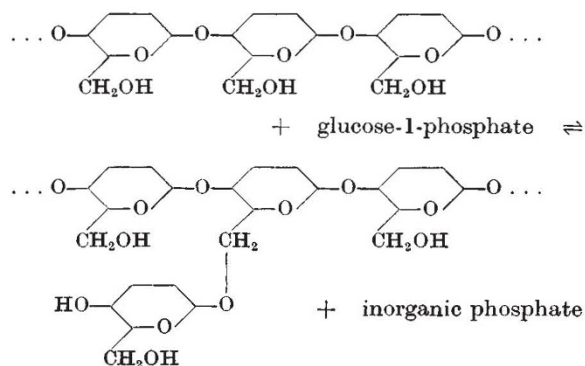


recently by Katz, Hassid and Doudoroff⁶. We have found that isophosphorylase does not attack linkages in the interior of the molecule, and in this respect behaves like phosphorylase, as the viscosity of a starch paste is not reduced in the presence of isophosphorylase. The reversible catalytic effect of isophosphorylase may therefore be schematically represented as follows:



Furthermore, the behaviour of isophosphorylase with regard to the viscosity of starch paste proves the absence of any α -amylatic action in our preparations, which are thus distinct from the 'Q enzyme' of Peat, Bourne and Barker⁷.

We are indebted to Prof. K. H. Meyer for his interest in this investigation.

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Astaxanthin in Insects and Other Terrestrial Arthropods

IN a very interesting note on the carotenoids of the locust integument, Goodwin and Srisukh¹ point out the presence of astaxanthin, besides other carotenoids, in *Locusta migratoria* and in *Schistocerca gregaria*. "The demonstration of astaxanthin in locust," they say, "is particularly interesting because, apart from its detection in the retina and eye colourings of birds, this is the first time it has been reported in land animals."

This statement is not quite exact. In 1939 I found this pigment in a mite of the genus *Trombidium*². The pigment is completely extracted by acetone from

the mite's body, transferred to petroleum ether and obtained, through evaporation of the solvent, as a red oily residuum (from 3 gm. of mites, 2 gm. of this oil). After saponification, the pigment is taken up again in benzene and after purification by chromatography gives crystals which are intensely violet to red violet under the microscope (2 mgm. of crystals). They give all the reactions characteristic for carotenoids and a peculiar absorption spectrum (a single band at 515 μ in carbon disulphide and at 500 μ in pyridine). This result and the chromatographic behaviour and solubility indicate undoubtedly astaxanthin. It is quite probable that this pigment is not infrequent in insects and in other arthropods.

Last year I found a pigment of a similar kind in the potato beetle (*Leptinotarsa decemlineata*). The benzene fraction of the carotenoid pigment gives, with benzene at 70–80°, an orange-yellow zone that splits up in two zones: an epiphasic one, rose-yellow, consisting of β -carotene; an epiphasic one, that is progressing on the column very slowly, eluted with benzene at 70–80° which shows a rose-yellow colour, rose in carbon disulphide, with a spectrum showing one large band with maximum near 497 μ ^{3,4}. This pigment looks like the carotenoid pigment that I extracted and crystallized from the fat of a *Phœnicopterus roseus*, the carmin-rose feathers of which perhaps owe their colour to this very pigment. This pigment, which I called 'phœnicoxanthin'⁵, shows one adsorption band near 490 μ in pyridine and differs from astacene both in the position of the adsorption band and in the different solubility and different colour in various solvents.

A full series of investigations is being planned in order to study the metabolism of carotenoid pigments in *Leptinotarsa* fed on various Solanaceæ.

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The Trimethylplatonic Group

Pope and Peachey¹ prepared diamminotrimethyl platonic iodide, $(\text{CH}_3)_3\text{PtI}(\text{NH}_3)_2$, readily soluble in alcohol, but sparingly soluble in water. We now find that pyridine added to trimethylplatonic iodide in benzene gives after concentration dipyridinotrimethylplatonic iodide, $(\text{CH}_3)_3\text{PtI}(\text{C}_5\text{H}_5\text{N})_2$, m.p. 168°, without previous decomposition, and that similarly from all proportions of dipyridyl and trimethylplatonic iodide, dipyridyltrimethylplatonic iodide, $(\text{CH}_3)_3\text{PtI}$, dipy, is obtained, insoluble in water, but soluble in chloroform and acetone, m.p. 268–273°. It is apparently unchanged by boiling with dilute acetic acid, hydrochloric acid, ammonia or twice normal sodium hydroxide. It is, however, decomposed by ethylene diamine with formation of sesquiethylene-diaminetrimethylplatonic iodide, $2(\text{CH}_3)_3\text{PtI}.3\text{en}$, which may be recrystallized from water. The latter compound can also be prepared from excess of ethylene diamine and trimethylplatonic iodide in benzene. Its structure is probably: