

8. *Jasis zonaria* (Pallas). (Solitary and Aggregate.)
9. *Thalia democratica* (Forskål). (Solitary and Aggregate.)
10. *Pegea confœderata* (Forskål). (Solitary and Aggregate.)
11. *Traustedia multitentaculata* (Quoy and Gaimard). (Solitary.)

CYCLOMYARIA—

1. *Doliolum denticulatum* Quoy and Gaimard.
2. *Dolioletta gegenbauri* Uljanin.
3. Two kinds of Nurse Forms.

A detailed account of the forms mentioned above together with information regarding their periodicity, as seen from their occurrence in townet collections made during the last five years, will be given when publication facilities become normal.

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April 3, 1943. R. GOPALA AIYAR.

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EFFECT OF STORAGE TEMPERATURES UPON THE VISCOSITY BEHAVIOUR OF POTATO STARCH

THE viscosity of 1 per cent. potato starch-paste varies from season to season. This is a great handicap in the sizing of fabrics as the amount of size taken up depends upon the viscosity of the size.

In Fig. 1 the viscosity behaviour of a high grade potato starch together with some commercial samples of potato starches is shown.

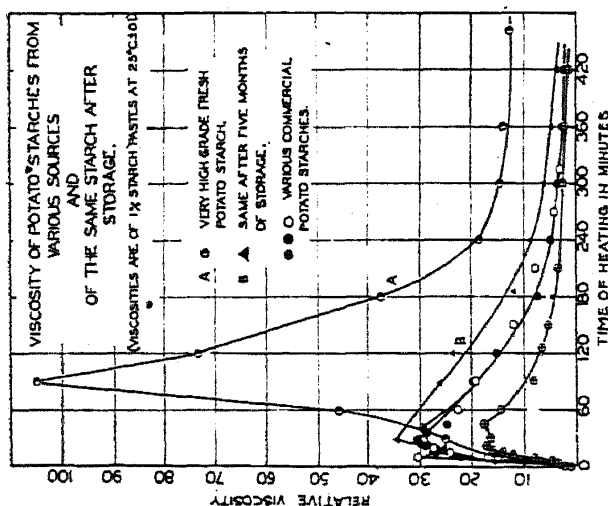


FIG. 1

Curve A was determined in January 1935 while Curve B was obtained for the same starch after five months of storage. The other curves are

of several commercial starches obtained from various places during July of 1935.

It will be seen from Curves A and B of Fig. 1 that enormous differences exist in the viscosity behaviour of the same sample of starch during winter and summer. It was thought that the temperatures of storage might have been the cause of this wide variation.

A fresh sample of potato starch was obtained from the Presque Isle Mills of the New England Starch Company through the late Dr. J. R. Katz (in whose laboratory this work was carried out at Cambridge, Mass., U.S.A.) in the first week of July 1935 and its viscosity determined. This sample showed the lowest viscosity that the author has observed in potato starches. On July 11th, 1935, 25-gram samples of this starch were hermetically sealed in Pyrex glass tubes to avoid any differences due to moisture changes during the period of storage. One sample was kept in a refrigerator at 4° C., another in a room where the temperature during day remained around 21° C., and a third at a temperature of 30° C. The tubes were cut open during the last week of September 1935 and the viscosity of 1 per cent. pastes determined in the usual manner.¹ The results are shown graphically in Fig. 2.

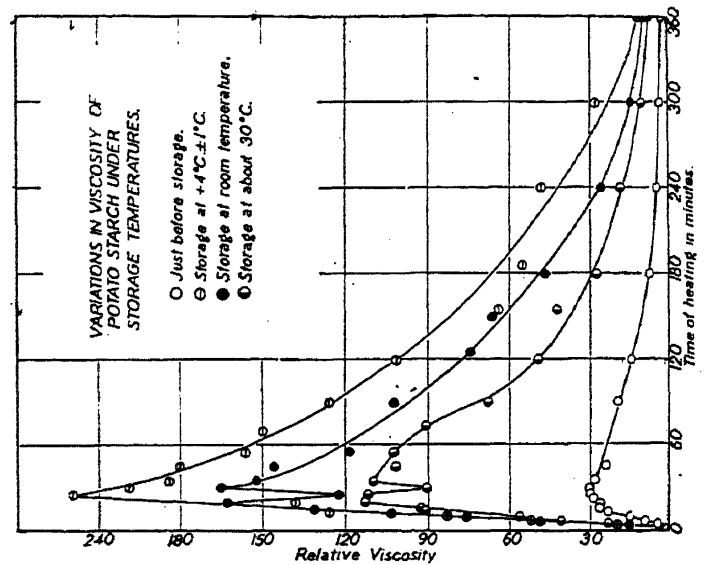
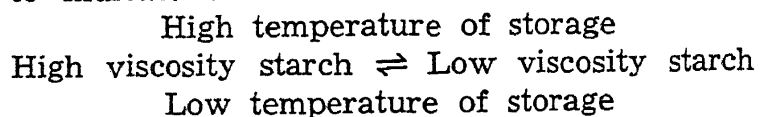


FIG. 2

It will be seen that the temperature of storage has greatly affected the viscosity behaviour of starch. The sample stored at 4° C., records the highest viscosity. The lower the storage temperature, the higher will be the maximum viscosity attained. The results seem to indicate a reversible reaction of the type



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