chromosomes have been recorded independently by Japanese and Indian cytologists for the variety *gigantea*. With no evidence so far to the contrary, it is not inconceivable that the New Zealand variety has derived from a south-east Asian source via the Malayan Peninsula and the chain of islands to the south and east.

It must be stressed, however, that the bearing of such evidence, alone, on the origins of the Maori cannot extend beyond the nearest neighbouring island in a chain of this sort, since it is entirely within the realms of possibility that the Maori acquired the taro while *en route* from a totally different area of the Pacific. Nevertheless, by an extension of the method (since presumably the forerunners of the Maori carried comparable food plants in prior migrations) it may be possible to trace the origin of this and other racial groups progressively farther and farther back into prehistorical times. Further studies along these lines are being planned, utilizing in addition other species of taro (*Xanthosoma*, *Alocasia*, *Cyrtosperma*) as well as *Ipomoea* spp. (sweet potato and kumara) and the yam (*Dioscorea*).

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Histamine of the Reptilian Stomach and Lung

Wright *et al.*[1] have demonstrated that the stomach of *Testudo graeca*, *Tachysaurus rugosus* and *Tiliqua nigro-lutea* secretes hydrochloric acid and some pepsin in response to large doses of histamine but is only slightly responsive to vagal stimulation. The histamine concentration of the stomach of *Tiliqua nigro-lutea* (closely related to *Tachysaurus*) was therefore investigated in November 1955. The full thickness of stomach of one lizard was cut up, after scraping off contents, and boiled in Tyrode. The concentration of histamine on titration was 75 μgm./gm., which is a high level.

Histamine was demonstrated in the Tyrode-boiled extract by assay on the isolated jejunum of the guinea pig suspended in Tyrode, before and after treatment with anti-histamine, when the response of equivalent doses of histamine always equalled that of the titrated stomach extract. Assay on the systemic blood pressure of the atropinized cat confirmed the concentration exactly. Further, paper chromatography with two solvents (propyl alcohol–acetic acid–water and butyl alcohol–acetic acid–water) yielded equal runs with pure histamine hydrochloride and stomach extract, one run of which is illustrated in Fig. 1.

Extract for the chromatography was obtained by the modified method of Code[2] for histamine extraction of the whole stomach of another lizard which contained a comparable amount of histamine. Barger and Dale[3] found 19 μgm. histamine/gm. in the intestinal mucosa of the ox, Kellaway and Trethewie[4] a maximum of 48 μgm. histamine/gm. in the whole perfused gut of the guinea pig, and unsqueezed adult guinea pig lung (Australian) contains usually 20–40 μgm. histamine/gm. [5].

The lungs of these reptiles showed no evidence of histamine in them, only a 'slow-reacting' substance like that described by Kellaway and Trethewie[4] or 'slow-contracting substance'[6,7].

Fig. 1. Chromatogram of lizard stomach extract compared with histamine dihydrochloride, with propyl alcohol – acetic acid – water solvent

The paper chromatography was kindly performed by Mr. Peter Morgan.

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March 8.

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A Case of DDT Poisoning in Fish

A series of experiments were conducted at Khartoum by a private company concerning the control of *Tanytarsus lewsii*, a green chironomid. During these experiments, a section of the Blue Nile was sprayed by air at Soba Village about ten miles above Khartoum, with an emulsifiable oil containing 30 per cent DDT and 0·5 per cent 'Lissapol'. The equivalent of 440 lb. DDT was sprayed over an area in order to give a calculated DDT content of 0·09 p.p.m. It was hoped that by the time treated water reached Khartoum, the DDT concentration would have been diluted four times. The concentration of DDT at the time of arrival at Khartoum was 0·017 p.p.m. and was then maintained at a level of 0·003 p.p.m. for six hours.

The same day, it was reported that "hundreds of fish were found dying" at Burri Village about two miles above Khartoum, at about the time the treated water was expected to arrive there. Two of these fish were brought to these laboratories on the following day. Prior to chemical examination, they were submitted to Dr. Rzoska, of the University College, Khartoum, for post-mortem examination, who reported the following findings :