

Korochkin, L.I. and E.S. Belyaeva. Institute of Cytology and Genetics, Novosibirsk, U.S.S.R. Esterase isozymes of *Drosophila imeretensis*.

Starch and polyacrylamide gel electrophoresis were used to examine the esterase patterns in *D. imeretensis* stock 27 (from the collection of Prof. N. Sokoloff, Institute of Developmental Biology, Moscow) and also in ♀ *D. virilis* (stock 9, Batumi) x *D. imeretensis* ♂ hybrids in the process of ontogenesis. Figure 1 presents an esterase pattern of *D. imeretensis*. Noteworthy is that *D. imeretensis* esterases, on the whole, surpass in electrophoretic mobility the esterases of all the other *Drosophila* of the *virilis* group (*D. texana*, *D. virilis*, *D. littoralis*) we have studied. 6 fractions are distinguished in *D. imeretensis*; just as in *D. virilis*, some of these fractions are represented by 2-3 subbands. Two fractions stain usually more intensely; one of them is β-esterase (esterase-3 on Figure 1). A number of fractions exhibit some individual variability such as absence of some α-esterases, differences in electrophoretic mobility and activity.

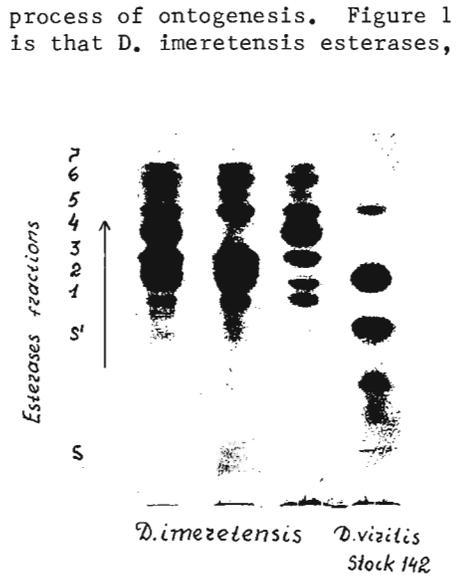


Fig. 1. Electropherograms

We have produced a number of inbred substocks. One of these stocks, 10F, is characterized by the presence of an additional slow S-esterase belonging to β-esterases. In *D. imeretensis* β-esterase is well expressed at third instar and stains very heavily, which is quite in contrast to *D. virilis*, *D. texana* and *D. littoralis*. In ♀ *D. virilis* stock 9 x *D. imeretensis* stock 27 ♂, a differential expression of parental esterases is observed in that esterase-4 of *D. virilis* stock 9 is weakly expressed and the activity of the homologous esterase of *D. imeretensis* predominates; an inverse pattern is observed with respect to the fastest esterase.

Angus, D.S. Salisbury College of Advanced Education, Adelaide, S.A., Australia. Polymorphism in *D. immigrans*.

The ubiquitous species, *Drosophila immigrans*, forms a high proportion (up to 80%) of the *Drosophila* fauna of Adelaide.

Collections were made during September 1973 by sweeping over fermenting banana baits

at Toorak Gardens, Adelaide, South Australia.

Examination of individuals revealed that *Drosophila immigrans* exhibits phenotypic polymorphism for markings on the thorax.

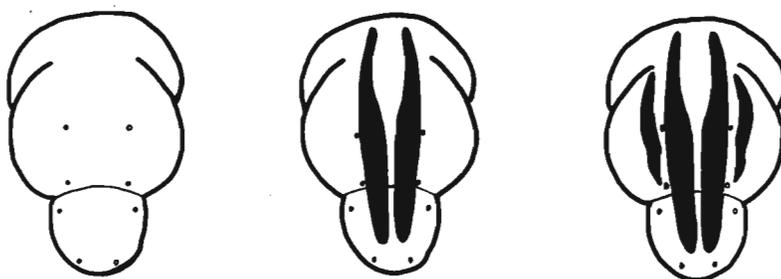


Fig. 1.

	THORAX MARKINGS			
	4 stripes	2 stripes	unstriped	total
♂	123	194	108	425
♀	9	34	9	52
TOTAL	132	228	117	477
%	27.7	47.8	24.5	100

Drosophila immigrans exhibits phenotypic polymorphism for markings on the thorax. The thoracic markings, when present, consist of two or four dark brown longitudinal stripes, as shown in Figure 1. The medial pair lie between the dorsocentral bristles and extend on to the scutellum; the lateral pair lie laterad to the dorsocentral bristles and do not extend on to the scutellum. The proportion of individuals which exhibited these markings are shown in the table. A genetical analysis of the material will be made in order to determine the mode of inheritance of the striped thorax condition. The results of this investigation will be reported elsewhere.