expected genotypes.

It is interesting to note that all the populations are polymorphic for the Pgm gene and that in all samples the more frequent alleles are the same, i.e., Pgm^A and Pgm^B. The other alleles, when present, show very low values.

A more detailed paper, discussing the possible mechanisms for the interpretation of these data is in preparation.

References: Spencer, N., D.A. Hopkinson and H. Harris 1964, Nature 204:742-745; Trippa, G., C. Santolamazza and R. Scozzari 1970, Biochem. Genet. 4:665-667.

Dübendorfer, A. and G. Shields. University of Sussex, Brighton, England. Proliferation in vitro and in vivo of a cell line originally derived from imaginal disc cells.

I. Schneider (1972) reported that the in vitro imaginal disc cell lines she had obtained from old embryos of Drosophila melanogaster had lost the ability to metamorphose when transplanted into larval hosts, although cells from primary cultures ("spheres") could do so. We confirmed these results using cells of her line 3 which had been maintained in our laboratory for 1 1/2 years in Schneider's medium. When injected into late third instar larvae these cells continued multiplication throughout metamorphosis and subsequent adult life of the host.

The same cells, when transplanted into young adult females, proliferated rapidly and killed the host after 9 to 10 days. The implants were very similar in appearance to atelotypic imaginal disc lines (Hadorn, 1969) and neoplastic cell lines derived from l(2)gl brain tissue (Gateff and Schneiderman, 1969). They could be returned to in vitro culture after 3 transfer generations in vivo (3 weeks) without apparent change in cell form and multiplicative ability.

Recently, we also obtained a fast growing cell line in vivo which appears to be similar to atelotypic imaginal disc tissue but originated from a cell culture set up in vitro after the method of Shields and Sang (1970) from 6-8^h old embryos. After 3 weeks of culture in vitro, a sample has been transplanted into an adult female where rapid cell multiplication took place. We are now maintaining this line in vivo at 17^{o}C.

References: Gateff, E. and H.A. Schneiderman 1969, Nat. Cancer Inst. Monogr. 31:365; Hadorn, E. 1969, Nat. Cancer Inst. Monogr. 31:351; Schneider, I. 1972, J. Embryol. Exp. Morph. 27:353; Shields, G. and J.H. Sang 1970, J. Embryol. exp. Morph. 23:53.

Paterson, H.E. and N. Monzu. University of Western Australia, Nedlands, W.A., Australia. New records of Drosophila nicholsoni Malloch and D. nitidithorax Malloch from Perth, Western Australia.

Malloch (1927) described two new species of Drosophila from Perth, Western Australia, D. nitidithorax and D. nicholsoni. There are no later records in the literature.

In July 1970 students of the Department of Zoology, University of Western Australia, surveyed the Drosophila species occurring within a 50 km radius of Perth. Fourteen sites were sampled using banana and fermenting wheat bran baits. At eight of the sites D. nitidithorax was recorded, usually at low density, but commonly at Quinn's Rock (40 km N. of Perth, on the coast). Banana bait proved attractive to this species, but it has been found subsequently on liver bait in blowfly traps. It is a member of the subgenus Scaptodrosophila and has been found to have typical six filament eggs and "skipping" larvae. It can be maintained on standard medium.

D. nicholsoni is an unusual species having only one dorsal ray on the arista. A specimen was caught indoors in Nedlands, a Perth suburb, during June 1971. Its relationships are not certain.

The type of D. nitidithorax has been destroyed, but the description agrees well with the specimen collected. The type of D. nicholsoni is still in existence though somewhat damaged. However, there is no question about the conspecificity of the new material with the type.

Reference: Malloch, J.R. 1927, Proc. Linn. Soc. N.S.W. 52:1-15.

Note added in proof: Since the above was written a further five specimens of D. nicholsoni were recovered from a large collection of insects taken by sweeping at York, Western Australia, about 60 miles inland from Perth.