

Mather, W.B. and P. Thongmeearkom.
University of Queensland, Brisbane,
Australia. The nasuta complex in Luzon.

In January 1972, sixty one iso-lines were established from a collection from Luzon, Philippines. Twenty seven heterozygous inversions were detected in variable frequency (see Table). Previous studies in Cebu, Philippines and Taiwan

(Mather and Thongmeearkom 1972a, 1972b) had detected 20 inversions and of these 10 are present in Luzon but 17 are new.

Morphological study of a sample of 32 iso-lines allowed the separation of four taxons. Three of these had already been detected previously, Taxon B with white orbits in Cebu and

<u>Inversion</u>	<u>Type</u>	<u>Position</u>	<u>Heterozygosity Frequency</u>
B	Sim	III P	1.6
C	Sim	III D	39.3
D	Sim	III P	1.6
E	Sim	II L C	68.8
G	Sim	I P	11.4
H	Com	III P	1.6
I	Sim	III P	4.9
K	Sim	III D	1.6
L	Sim	III P	1.6
P	Sim	III P	3.3
T	Sim	I C	1.6
U	Com	III P	9.8
V	Com	III C	9.8
W	Com	III D	9.8
X	Com	III C	1.6
Y	Sim	III P	1.6
Z	Com	III C	1.6
<u>AA</u>	Sim	III P	1.6
<u>BB</u>	Com	I D	1.6
<u>CC</u>	Sim	I P	1.6
<u>DD</u>	Com	III C	1.6
<u>EE</u>	Com	III P	1.6
<u>FF</u>	Sim	II R P	6.6
<u>GG</u>	Sim	II R D	4.9
<u>HH</u>	Sim	II R P	1.6
<u>II</u>	Sim	II L C	1.6
<u>JJ</u>	Com	II L C	1.6

Sim = Simple, Com = Complex, D = Distal, C = Central and P = proximal to centromere.

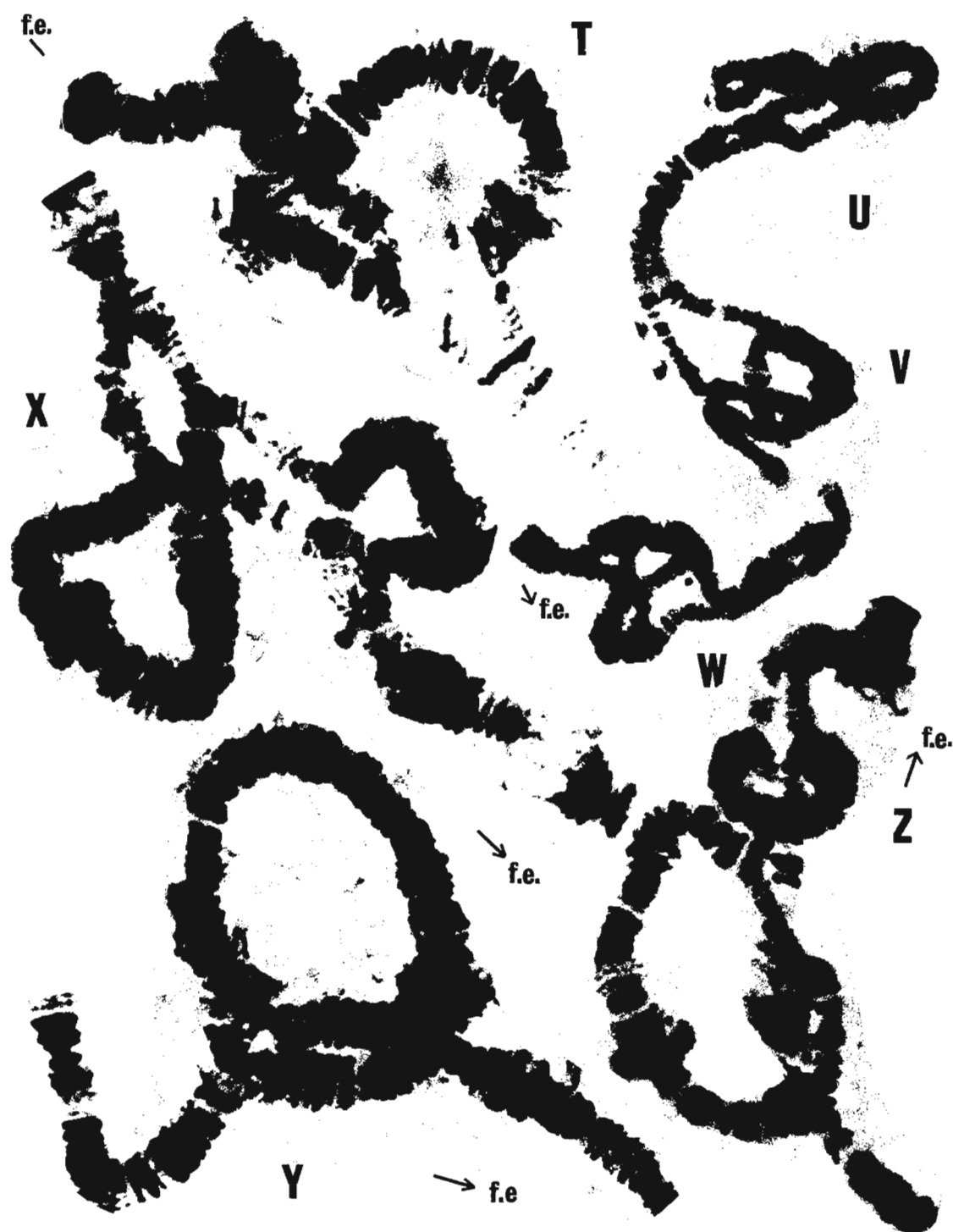
Taiwan, Taxon C with no white on the face in Taiwan and Taxon D with a white face in Cebu. In addition a new taxon - E with no white on the face but consisting of much smaller flies than Taxon C was distinguished.

The distribution of the inversions between the taxons are: Taxon B: C, E, G, AA, BB, CC, DD, HH, II, JJ; Taxon C: none; Taxon D: B, D, E, H, I, K, L, P, T, X, Y, Z, EE; Taxon E: U, V, W, FF, GG. Thus only inversion E is common between Taxon B and D and Taxon E appears to have unique inversions. The six lines examined of Taxon E all had the inversion U, V, W, associated (see Figure).

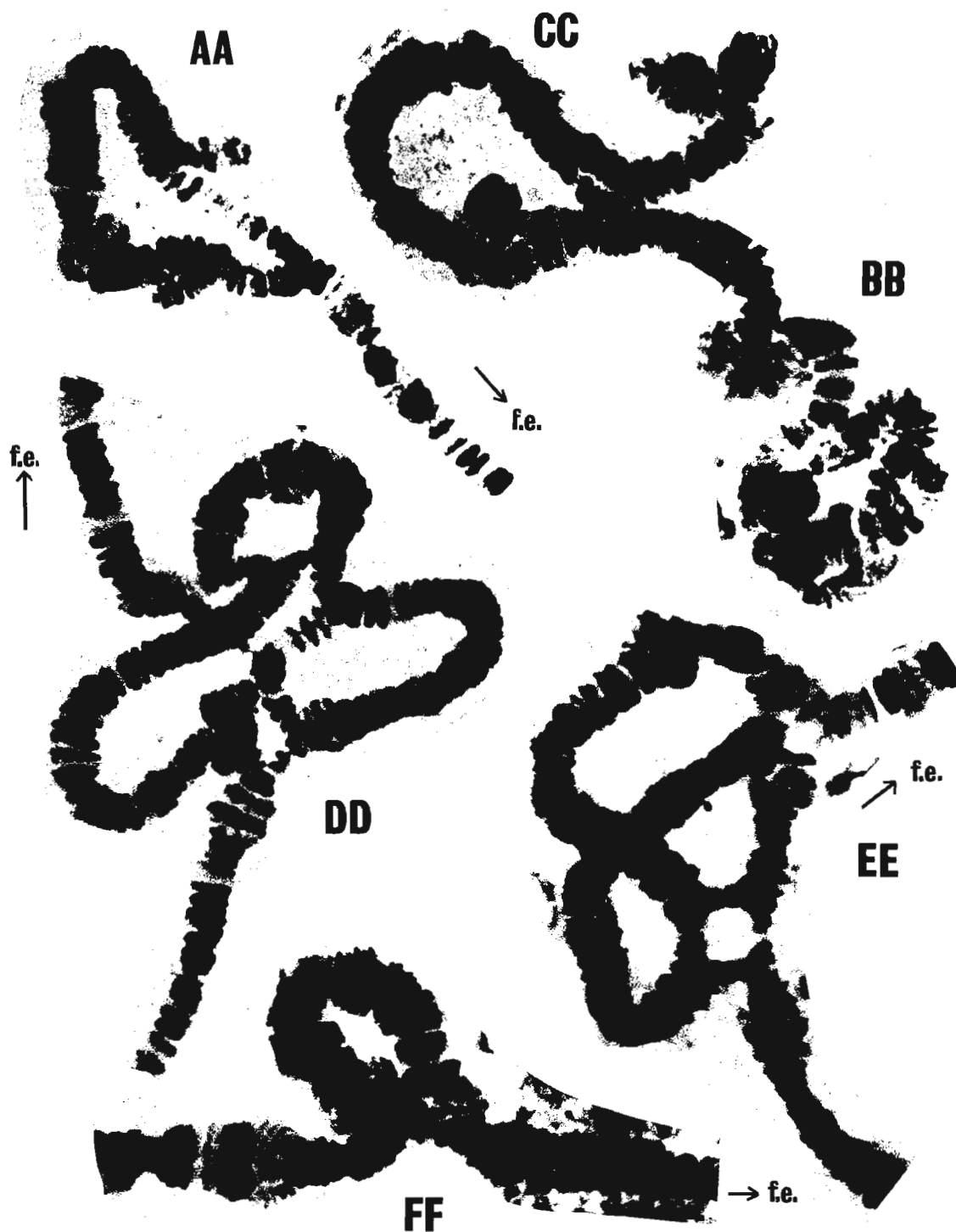
The hybridisation relationships between the postulated taxons which will throw light on their taxonomic status will be reported on in a later communication.

References: Mather, W.B. and P. Thongmeearkom 1972a, DIS 48:40; Mather, W.B. and P. Thongmeearkom 1972b, DIS 49:109

The material was collected and maintained and the larvae reared for dissection by W.B.M. The chromosomes were prepared, analysed and photographed by P.T.



Nasuta complex inversions. f.e., free end.



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