tial use of X-bearing sperm during the first day after insemination of the females would lead
to the observed result. The variation of the sex ratio (F/M) in the controls from brood 1 to
4 (1.17, 1.37, 1.06, 0.87) does not show the systematic variation expected on the basis of
this hypothesis. Statistically none of the 4 values is significantly different from the
weighted mean of 1.13.

b) The extremely high rate of X/0 males might result from the effect that during the
first day, Stage-14 Oocytes which had been stored in the virgin females for 2 to 4 days, were
inseminated. Physiological differences between stored and non-stored oocytes might be respon-
sible for the high rate of chromosome loss. Experiments to test this possibility are under
way.

c) As a third hypothesis one could assume that changes occur in the irradiated sperms
during the first day of storage in the females.

Finally it should be stressed here that this "storage" effect is also found with two
other types of females, but - as far as can be seen from preliminary data - seems to be
absent in experiments with females of two other stocks.

Work supported by Schweizerischer Nationalfonds zur Förderung der wissenschaftlichen
Forschung.

Mather, W.B. University of Queensland, 
Brisbane, Australia. The genus
Drosophila at Cebu, Philippines.

(Mather 1970) have already been recorded. In February 1970 the genus Drosophila was sampled
from fermenting banana baits within the grounds of the Cebu Forest Experiment Station at
Camp 7. Sorting of the flies yielded the following results:

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. setifemur</td>
<td>278</td>
<td>16.7</td>
</tr>
<tr>
<td>D. pararubida</td>
<td>374</td>
<td>22.4</td>
</tr>
<tr>
<td>melanogaster group</td>
<td>1,014</td>
<td>60.9</td>
</tr>
<tr>
<td></td>
<td>1,666</td>
<td></td>
</tr>
</tbody>
</table>

References: Mather, W.B., 1968 The genus Drosophila in Sabah. DIS 43: 100-101;
Mather, W.B., 1969 The genus Drosophila at Sandakan. DIS 44: 98; Mather, W.B., 1970 The

Limbird, D.L. College of Wooster, Ohio. 
A test for mutagenicity of MA and its
effectiveness in deactivating EMS.

Mercaptoacetic acid (MA) has been recommended
as a deactivator of ethyl methanesulphonate
(EMS) (Lewis and Bacher, DIS 43) although ex-
perimental tests were not reported which would
support its effectiveness. In the following
experiment, MA was tested for possible mutagenicity and for its effectiveness in deactivating
EMS. The experimental procedure involved treating 4-5 day old Canton-S males with one of four
test solutions: a) control: lm KOH in 1% sucrose solution + carmine; b) 0.5% MA: 0.5ml MA/
100 ml control solution; c) 0.025M EMS: 0.24ml EMS/100ml control solution; d) EMS/MA: 0.5ml
EMS/100ml control solution. Males fed for 24 hours from a pad of Kimwipes saturated with one
of the solutions. Only those flies having definitely red guts due to the vital dye carmine
were used in M-5 tests for sex linked recessive lethals. According to the results tabulated
below, MA should be considered safe to use as a deactivator of EMS, being non-mutagenic itself
and effectively cancelling the mutagenic properties of EMS.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>No. X chromosomes tested</th>
<th>No. X chromosomes lethal</th>
<th>Mutation rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>387</td>
<td>1</td>
<td>.003</td>
</tr>
<tr>
<td>MA</td>
<td>309</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>EMS</td>
<td>245</td>
<td>35</td>
<td>.143</td>
</tr>
<tr>
<td>EMS/MA</td>
<td>306</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>