

Horikawa and Fox (1964). Cell countings have been made at the beginning of the experiment and at 24, 48, 96, 144 and 192 hours, using the Bürker haemocytometer. Four independent repetitions have been run for every stock. In all experiments an increase of cell number was found up to 96 hours. Afterwards the cell number decreases, always remaining higher than the initial one, undoubtedly because of accumulation of catabolites and exhaustion of the medium (which has never been replaced).

Within each stock the behavior is similar; statistical analysis has nevertheless proved a certain heterogeneity. Among stocks the differences are statistically significant at 96 hours: Aspra shows the highest increase, while Varese and S. Maria grow less.

Cell viability at the end of the experiments is still good, as proved by active incorporation of  $H^3$ -thymidine seen on autoradiographs.

The differences in growth among stocks is interpreted as an expression of genotypic differences.

Kaneko, A., E. Momma and T. Shima.  
Hokkaido University, Sapporo, Japan.  
Frequencies of abundance of robusta  
species group in Hokkaido.

Collections were extensively made in many  
localities of Hokkaido during the years  
from 1958 to 1965. From 24 localities,  
more than 50 specimens of robusta species  
group were obtained in collection samples  
as shown in the accompanying table.

Among the robusta group, *D. lacertosa* was very frequent in occurrence in all localities listed in the table, except two localities, Yamada-Onsen and Mt. Raus.

Table 1. Percentage frequency of six species of robusta group  
in 24 localities of Hokkaido.

| Locality       | No. of flies<br>of robusta<br>sp. group | Percentage frequency of each species |                  |               |                 |                             |                  |
|----------------|---|--------------------------------------|------------------|---------------|-----------------|-----------------------------|------------------|
|                |   | <i>lacertosa</i>                     | <i>moriwakii</i> | <i>okadai</i> | <i>neokadai</i> | pseudo-<br><i>sordidula</i> | <i>sordidula</i> |
| Sapporo        | 1326                                    | 73.36                                | 2.49             | 0.75          | -               | -                           | 19.38            |
| Nopporo        | 10145                                   | 84.32                                | 5.33             | 2.88          | 2.02            | 5.42                        | 0.03             |
| Iwamizawa      | 209                                     | 94.74                                | -                | -             | -               | -                           | 5.26             |
| Matsumae       | 376                                     | 98.14                                | 1.63             | 0.27          | -               | -                           | -                |
| Ohnuma         | 242                                     | 33.47                                | 2.89             | 0.83          | -               | 5.37                        | 57.44            |
| Taisei         | 175                                     | 99.43                                | -                | 0.57          | -               | -                           | -                |
| Gunai          | 382                                     | 67.80                                | 12.83            | 17.80         | -               | -                           | 1.57             |
| Utasutsu       | 89                                      | 95.50                                | -                | 1.12          | 3.37            | -                           | -                |
| Toya           | 1443                                    | 83.09                                | 15.94            | 0.14          | 0.35            | 0.42                        | 0.07             |
| Jozankei       | 301                                     | 43.52                                | 48.84            | 6.64          | 0.33            | 0.66                        | -                |
| Hiroo          | 232                                     | 99.14                                | -                | 0.86          | -               | -                           | -                |
| Fuyushima      | 279                                     | 86.74                                | 8.24             | 0.14          | -               | -                           | 3.58             |
| Yamada-Onsen   | 104                                     | 3.85                                 | 93.27            | 2.88          | -               | -                           | -                |
| Utoro          | 257                                     | 61.87                                | 0.39             | 34.63         | -               | -                           | 3.11             |
| Okkope         | 103                                     | 100.00                               | -                | -             | -               | -                           | -                |
| Toikanbetsu    | 2262                                    | 90.32                                | 5.61             | 2.74          | 1.28            | 0.04                        | -                |
| Naebutoro      | 874                                     | 72.88                                | 1.14             | 25.97         | -               | -                           | -                |
| Mt. Toyoni     | 71                                      | 87.32                                | 12.68            | -             | -               | -                           | -                |
| Mt. Raus       | 75                                      | 28.00                                | 61.33            | 10.67         | -               | -                           | -                |
| Shakotan       | 90                                      | 72.22                                | 17.78            | 7.78          | -               | -                           | 2.22             |
| Rebun Isl.     | 229                                     | 65.07                                | 10.04            | 14.41         | 6.99            | 3.49                        | -                |
| Rishiri Isl.   | 177                                     | 80.23                                | 19.77            | -             | -               | -                           | -                |
| Yagishiri Isl. | 194                                     | 96.91                                | -                | 1.03          | 2.06            | -                           | -                |
| Okushiri Isl.  | 273                                     | 98.90                                | 0.73             | 0.37          | -               | -                           | -                |
| Total flies    | 19908                                   | 16391                                | 1402             | 835           | 263             | 580                         | 437              |