# APPENDIX G

## BENTHIC (BOTTOM) FAUNA DATA

# APPENDIX G-1

AVERAGE NUMBER OF BOTTOM ORGANISMS PER SQUARE METER FOR THE MAIN VALLEY LAKES, 1936, 1969 and 1971.

## OKANAGAN LAKE, 1936

| Depth (m) | 0-1 | 1-5 | 5-10 | 10-20 | 20-30 | 30-50 | 50-75 | 75-125 | All Depths | All Depths |
|---|---|---|---|---|---|---|---|---|---|---|
| No. of samples | 20 | 29 | 22 | 18 | 12 | 14 | 15 | 4 | 135 | per cent |
| Chironomidae | 113 | 260 | 405 | 356 | 206 | 313 | 300 | 188 | 268 | 73.6 |
| Oligochaeta | 20 | 26 | 36 | 40 | 23 | 110 | 68 | 102 | 53 | 14.6 |
| Ephemeroptera | 67 | 8 | 23 | 17 | 5 | 0 | 0 | 0 | 15 | 4.1 |
| Amphipoda | 32 | 11 | 35 | 21 | 0 | 0 | 0 | 0 | 12 | 3.3 |
| Trichoptera | 24 | 9 | 7 | 8 | 0 | 0 | 0 | 0 | 6 | 1.6 |
| Pisidium | 0 | 3 | 0 | 1 | 0 | 6 | 5 | 0 | 2 | 0.5 |
| Gastropoda | 9 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0.5 |
| Miscellaneous | 22 | 3 | 3 | 13 | 2 | 0 | 3 | 0 | 6 | 1.6 |
| All organisms | 287 | 321 | 513 | 456 | 236 | 429 | 376 | 290 | 364 | 99.8 |

## OKANAGAN LAKE, 1969

| Depth (m) | 0-1 | 1-5 | 5-10 | 10-20 | 20-30 | 30-50 | 50-75 | 75-125 | All Depths | All Depths |
|---|---|---|---|---|---|---|---|---|---|---|
| No. of samples | 2 | 7 | 5 | 6 | 4 | 4 | 1 | 3 | 32 | |
| Stations | 1,13 | 7,10, 14,18, 27,29, 32 | 8,9,11, 15,19 | 16,17, 20,21, 24,28 | 2,5,12, 31 | 3,4,6, 22 | 25 | 23,26 30 | All Stations | per cent |
| Chironomidae | 200 | 1,943 | 1,307 | 696 | 1,322 | 433 | 222 | 148 | 1,012 | 32.5 |
| Oligochaeta | 200 | 3,638 | 1,546 | 652 | 1,800 | 3,733 | 89 | 104 | 1,876 | 60.2 |
| Ephemeroptera | 0 | 20 | 35 | 0 | 0 | 0 | 0 | 0 | 10 | 0.3 |
| Amphipoda | 0 | 32 | 160 | 0 | 0 | 0 | 0 | 0 | 32 | 1.0 |
| Trichoptera | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0.1 |
| Pisidium | 0 | 140 | 0 | 59 | 267 | 30 | 0 | 15 | 79 | 2.5 |
| Gastropoda | 0 | 76 | 187 | 0 | 0 | 0 | 0 | 0 | 46 | 1.5 |
| Miscellaneous | 0 | 101 | 62 | 67 | 0 | 100 | 15 | 0 | 58 | 1.9 |
| All organisms | 400 | 5,963 | 3,297 | 1,474 | 3,389 | 4,396 | 426 | 177 | 3,116 | 100.0 |

APPENDIX G-l . . . CONTINUED

OKANAGAN LAKE, 1969

| Depth (m) | 0-1 | 1-5 | 5-10 | 10-20 | 20-30 | 30-50 | 50-75 | 75-125 | All Depths | All Depths |
|---|---|---|---|---|---|---|---|---|---|---|
| No. of samples | 1 | 5 | 5 | 6 | 3 | 1 | 1 | 3 | 25 | |
| Stations | 1 | 10,14, 18,27, 32 | 8,9,11, 15,19 | 16,17, 20,21, 24,28 | 2,12, 31 | 22 | 25 | 23,26, 30 | -- | per cent |
| Chironomidae | 400 | 1,138 | 1,307 | 696 | 1,052 | 400 | 222 | 148 | 841 | 38.6 |
| Oligochaeta | 356 | 1,698 | 1,546 | 652 | 844 | 4,655 | 89 | 104 | 1,127 | 51.7 |
| Ephemeroptera | 0 | 18 | 35 | 0 | 0 | 0 | 0 | 0 | 11 | 0.5 |
| Amphipoda | 0 | 44 | 160 | 0 | 0 | 0 | 0 | 0 | 41 | 1.9 |
| Trichoptera | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0.2 |
| Pisidium | 0 | 142 | 0 | 59 | 148 | 0 | 0 | 15 | 62 | 2.8 |
| Gastropoda | 0 | 53 | 187 | 0 | 0 | 0 | 0 | 0 | 48 | 2.2 |
| Miscellaneous | 0 | 44 | 62 | 67 | 0 | 88 | 15 | 0 | 44 | 2.0 |
| All organisms | 756 | 4,155 | 3,297 | 1,474 | 2,044 | 5,243 | 426 | 177 | 2,178 | 99.0 |

SKAHA AND OSOYOOS LAKES, 1969

| Depth (m) | 5-20 | 30-50 | All Depths | All Depths | 10-20 | 20-30 | 30-50 | All Depths | All Depths |
|---|---|---|---|---|---|---|---|---|---|
| No. of samples | 3 | 2 | 5 | 5 | 2 | 1 | 2 | 5 | 5 |
| Stations | 33,36, 37 | 34,35 | All Sta. | per cent | 38,42 | 41 | 39,40 | All Sta. | per cent |
| Chironomidae | 726 | 22 | 444 | 11.4 | 489 | 0 | 1,576 | 827 | 15.0 |
| Oligochaeta | 3,240 | 3,133 | 3,199 | 82.2 | 3,200 | 1,733 | 7,311 | 4,551 | 82.7 |
| Amphipoda | 237 | 0 | 142 | 3.6 | 0 | 0 | 0 | 0 | 0.0 |
| Pisidium | 148 | 0 | 89 | 2.3 | 0 | 0 | 0 | 0 | 0.0 |
| Miscellaneous | 30 | 0 | 18 | 0.5 | 22 | 578 | 0 | 124 | 2.3 |
| All organisms | 4,389 | 3,155 | 3,892 | 100.0 | 3,711 | 2,311 | 8,887 | 5,502 | 100.0 |

APPENDIX G-1 . . . CONTINUED

THE AVERAGE NUMBER OF BOTTOM ORGANISMS PER $M^2$ IN WOOD, KALAMALKA AND SKAHA LAKES

1971

| | WOOD | | | | | KALAMALKA | | | | | SKAHA | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (m) | 1-5 | 6.3 | 31.3 | All Depths | All Depths | 1-4 | 13-18 | 100 | All Depths | All Depths | 1-2 | 11-15 | 38-52 | All Depths | All Depths |
| No. samples | 9 | 3 | 3 | 15 | 15 | 12 | 9 | 3 | 24 | 24 | 6 | 6 | 6 | 18 | 18 |
| Stations | 1,2,5 | 4 | 3 | All Sta. | % | 6,9,10,11 | 7,8,12 | 13 | All Sta. | % | 14.17 | 15,18 | 16,19 | All Sta. | % |
| Nematoda | 10 | 30 | 104 | 33 | 4.3 | 4 | 15 | 119 | 22 | 2.0 | 22 | 119 | 5933 | 2025 | 20.4 |
| Oligochaeta | 79 | 548 | 0 | 157 | 20.9 | 141 | 888 | 104 | 416 | 38.3 | 1711 | 5044 | 15110 | 7288 | 73.4 |
| Malacostraca | 5 | 0 | 0 | 3 | 0.4 | 11 | 5 | 0 | 7 | 0.7 | 0 | 0 | 0 | 0 | 0.0 |
| Chironomidae | 588 | 904 | 30 | 539 | 71.7 | 485 | 919 | 119 | 602 | 55.4 | 733 | 956 | 133 | 607 | 6.1 |
| Pisidium | 0 | 0 | 0 | 0 | 0.0 | 0 | 25 | 0 | 9 | 0.9 | 0 | 0 | 0 | 0 | 0.0 |
| Micellaneous | 35 | 0 | 0 | 21 | 2.8 | 11 | 64 | 0 | 30 | 2.7 | 37 | 7 | 0 | 15 | 0.1 |
| All organisms | 716 | 1481 | 133 | 753 | 100.1 | 652 | 1915 | 341 | 1087 | 100.0 | 2504 | 6125 | 21176 | 9935 | 100.0 |

DEAD MOLLUSCA IN SAMPLES FROM KALAMALKA AND WOOD LAKES - 1971

| GASTROPODA | STATION NO. |
|---|---|
| Physa cf. jennesi skinneri Tayl. | 6,7,12 |
| Lymnaea stagnalis (L) | 7 |
| Lymnaea decampi (Streng) | 6,7,9,11,12 |
| Lymnaea cf. decampi juv. | 1,6,7,9,11,12 |
| Lymnaea elodes (Say) | 6,7,11,12 |
| Lymnaea columella (Say) | 7,11 |
| Lymnaea cf. proxima (Lea) | 6,7,9 |
| Helisoma anceps (Minke) | 6,7,9,11,12 |
| Helisoma trivolvis (Say) | 6,7,9,12 |
| Gyraulus deflectus (Say) | 1,4,6,7,8,9,10,11,12 |
| Promenetus exacuous (Say) | 6,7,9,12 |

| GASTROPODA | STATION NO. |
|---|---|
| Amnicola lustrica Pils. | 10 |
| Valvata sincera Say | 6,7,8,9,11,12 |
| PELECYPODA | |
| Pisidium casertanum (Poli) | 6,7,8,9,10,11,12,13 |
| Pisidium compressum Prime | 1,6,7,8,9,10,11,12 |
| Pisidium nitidum Jen. | 7 |
| Pisidium obtusale Pfeiff. | 6,7,9,11,12,13 |
| Pisidium walkeri Starki | 6,7,11,12 |



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# APPENDIX G-2

## NUMBER OF SPECIMENS COLLECTED PER SAMPLE IN OKANAGAN, SKAHA AND OSOYOOS LAKES (1969) (Stations 1 to 42)

### OKANAGAN LAKE, 1969

| Station No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (m) | 1 | 23 | 33 | 45 | 26.5 | 38 | 1.5 | 6.5 | 10 | 2.5 | 5 | 26.5 | 1 | 3 | 8 | 13 |
| c= clay g=gyttja s=sand & shells and v=vegetation d= wood, debris, detritus | s<br>v | c | c | c | c | c | g<br>c | g<br>c | c<br>c[g] | s<br>g | s | c | s | c<br>v[g] | c<br>g | c<br>g |
| *Acricotopus* sp. | | | | | | | | | | | 1 | | | | | |
| *Arctoneis* sp. | | | | | 85(5) | | | | | | | 1(1) | | | | |
| *Aulodrilus pigueti* Kow. | | | | | | 1 | | | | | | | | | | |
| *Aulodrilus pluriseta* (Piq.) | | | | | | | | | 2(2) | | | | | | | |
| *Chironomini indet.*, deformed | | | | | | | | | 1* | | | | | | | |
| *Chironomus anthracinus* + *Thummi* types | | | | | | | 1 | | | | | | | 6 | | 1 |
| *Chironomus plumosus* type | | | | | | | | | | | | | | 1 | 1 | |
| *Chironomus salinarius* type | | | | | | | | | | | | | | 1 | | |
| *Chironomus semireductus* type | | 1 | | | | | | 2 | | | | | | 8 | 4 | |
| *Cladotanytarsus* sp. | 1 | | | | | | 138 | 5 | | | | | | | | |
| *Cricotopus "Eucricotopus brvipalpis"* type | | | | | | | | | | 1 | | | | | | |
| *Cricotopus "Eucricotopus"* group | 1 | | | | | | 3 | | | 5 | 1 | | | | | |
| *Cryptotendipes* sp. | | | | | | | | 1 | 2 | | | | | | | |
| *Cryptochironomus* sp. | | | | | | | 6 | 6 | 8 | | | | | | | |
| *Dicrotendipes* sp. | | 2 | | | | | | | | | | | | | | |
| *Ferrisia paralella* Haldem. | | | | | | | 1 | | | | | | | | | |
| *Gyralaus parvus* Say | | | | | | | 2 | 2 | | | | | | | | |
| *Harnischia* sp. | | | | | | | | | 3 | 2 | | | | | | |
| *Heterotrissocladius* cf. *subpilosus* (K.) | | 15 | 11 | | 31 | | | | | | | 4 | | | | |
| *Hexagenia limbata* (Serv.) | | | | | | | | 3 | | | | | | | | |
| *Hyalella azteca* (Sanss.) | | | | | | | | 9 | | | 9 | | | | | |
| *Iloyodrilus templetoni* (South.) | 2(2) | | | | 2(1) | | | | 6(1) | | 1(1) | 9(4) | | | | |
| *Limnesia (limnesia) undalata* (Mull.) | | | | | | | | | | | | | | | | |
| *Limnodrilus claparedeanus* Ratz. | | | | | | | 8(1) | | | | | | | 11(1) | | |
| *Limnodrilus hoffemisteri* (Clap.) | | | 30(2) | | | 11(1) | 34(4) | 21(2) | | 20(2) | 24(3) | 3(1) | | 12(1) | | 11(10 |
| *Limnodrilus* sp. | | 1 | | | 10(10) | | | | 5(5) | | | 1(1) | | | | |
| *Limnodrius udekemianus* Clap. | | | | | | | 9(1) | 10(1) | | | | | | | 4(1) | |
| *Mentus cooperi* Bak. | | | | | | | | 1 | | | | | | | | |
| *Micropsectra* sp. | 1 | | | | | | | 1 | | | | | | | | |
| *Monodiamesa* cf. *bathyphila* K. | | | | | | | 1 | | | | | | | | | |
| *Nais elinguis* Mull | | | | | | | | | | 1(1) | | | | | | |

* Deformed specimens.

* Numbers in brackets:oligochaetes identified from mounted and/or mature specimens.

## APPENDIX G-2

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OKANAGAN LAKE, 1969

| Station No. | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (m) | 20 | 2 | 6 | 13 | 19.5 | 33 | 87 | 13 | 75 | 117 | 5 | 19 | 2 | 78.5 | 24 | 4 |
| c=clay g=gyttja s=sand & shells and v=vegetation d=wood,debris, detritus | c<br>g | s<br>g | s<br>g | c<br>g | c<br>g | c<br>g | c<br>g | d<br>s | c | c | s<br>d | c | g<br>s | c | c | s<br>v |
| *Aulodrilus americanus* Brinkh. | | | | | | | | | | | | | | | | 10(1) |
| *Bezzia, Probezzia, Sphaeromias* | | | | | | 1 | | | | | | | | | | |
| *Chironomus anthracinus + thummi* types | | | 2 | | | | | 10 | | | | 7 | | | | |
| *Chironomus plumosus* type | | 1 | | | | | | | | | | | | | | |
| *Chironomus salinarius* type | | | | 2 | 5 | 3 | 1 | | 1 | 1 | | | | | | |
| *Chironomus semireductus* type | | | | | | | | 5 | | | | | | | | |
| *Cladotanytarsus* sp. | | | 1 | | | | | | | | | | | | | |
| *Cricotopus "Paratrichocladius"* group | | | | | | | | | | | | 11 | | | | |
| *Cryptotendipes* sp. | | | | 2 | | | | | | | | | | | | |
| *Cryptochironomus* sp. | | 1 | 1 | | | | | | | | 2 | | | | | |
| *Dicrotendipes* sp. | | | | | | | | | | | | | | | | |
| *Dugesia tigrina* (Gir.) | | | | | | | | | | | | | | | | 4 |
| *Gyralaus parvus* Say | | 1 | | | | | | | | | | | | | | |
| *Helobdella stagnalis*(L.) | | | | | | | | | | | | | | | | 1 |
| *Heterotrissocladius* cf. *subpilosus* (K.) | | | | | 1 | 2 | | | | 1 | | 12 | | 1 | 13 | |
| *Hexagenia limbata* (Serv.) | | | | | | | | | | | 2 | | 1 | | | |
| *Hyalella azteca* (Sanss.) | | | | | | | | | | | 1 | | | | | 4 |
| *Hygrobates (Tetrabates) Neooctoporus* Marsh. | | | | | | | | | | | | 6 | | | | |
| *Ilyodrilus templetoni*(South.) | 1(1) | 2(2) | | | 4(4) | 19(2) | | 17(3) | | | 4(2) | | | 1(1) | | 9(2) |
| *Kincaidiana hexatheca* Altm. | | | | | | | | | 1(1) | | | | | | | |
| *Limnephilidae indet.* | | 1 | | | | | | | | | | | | | | |
| *Limnodrilus* sp. | | | 9(9) | | 5(5) | | | 8(8) | | | | | | 1(1) | 14(14) | |
| *Limnodrilus claparedeanus* Ratz. | 4(2) | | | | | | | | | | | | | | | |
| *Limnodrilus hoffmeisteri* (Clap.) | | 11(1) | | 7(1) | | 77(2) | | | | | | 12(1) | 1(1) | 54(3) | | 20(2) |
| *Limnodrilus* cf. *profundicola* (Verr.) | | | | | | | 1(1) | | | 1(1) | | | | | | |
| *Micropsectra* sp. | | | | | | | | | | | | 1 | | | | |

* Deformed specimens.

* Numbers in brackets: oligochaetes identified from mounted and/or mature specimens.

OKANAGAN LAKE, 1969

| Station No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (m) | 1 | 23 | 33 | 45 | 26.5 | 38 | 1.5 | 6.5 | 10 | 2.5 | 5 | 26.5 | 1 | 5 | 8 | 13 |
| c=clay g=gyttja s=sand & shells and v= vegetation d=wood, debris, detritus | s<br>v | c | c | c | c | c | g<br>c | g<br>c | c<br>c[g] | s<br>g | s | c | s | c<br>v[g] | c<br>g | c<br>g |
| *Nematoda indet.* | | | 6 | | | | 9 | 3 | | | | | | | | |
| *Ogopogo kelownensis fossae* Flann. et Saeth. | | | | | | 1 | | | | | | | | | | |
| *Ophidonais serpentina* (Mull.) | | | | | | | 114(10) | | | | | | | | | |
| *Orthocladius (s. str.) annectens* Saeth. | 1 | | | | | | 1 | | | 2 | | | | | | |
| *Parachironomus* sp. | | | | | | | | 1 | | | 2 | | | | | |
| *Paracladopelma* sp. | | | | | 1 | | | | | | | | | | | |
| *Parakiefferiella* sp. | | | 2 | | 1 | | | | | | | | | | | |
| *Paratanytarsus* sp. | 1 | | | | | | | | | | | | | | | |
| cf. *Peloscolex* sp. | | | | | | | | 1(1) | | | | | | | | |
| *Phaenospectra (Sergentia)* cf. "*longiventris*" sensu Wulk. | | 1 | | | | | | | | | 6 | | | | | |
| *Phaenopsectra (Sergentia)* sp. nec. "*longiventris*" | | | | | | | | 1 | | | | | | | | |
| *Piona (Piona) interrupta* Marsh. | | | | | | | | | | | 3 | | | | | |
| *Pisidium compressum* Prime | | 6 | 2 | | 14 | | 1 | | | | | 4 | | 1 | | |
| *Planorbula campestris* Daws. | | | | | | | 1 | 8 | | | | | | | | |
| *Potthastia* cf. *longimana* (K) | 1 | | | | | | | | | | | | | | | |
| *Procladius (Psilotanypus)* spp. | | | | | | | 5 | 14 | 32 | | 3 | | | | | |
| *Procladius (s. str.)* spp. | | | | | | | | | | | | | | | | |
| *Protanypus* cf. *morio* (Zett.) | | | 1 | | 3 | | | | | | | | | | | |
| *Psectrocladius (s. str.) simulans* Joh. | 1 | | | | | | | | | 29 | 1 | | | | | |
| *Pseudochironomus* sp. | | | | | 1 | | | | | 2 | | | | | | |
| *Slavina appendiculata* (d'Udek.) | | | | | | | | | | 8(8) | | | | | 1(1) | |
| *Stempellina* sp. | | | | | | | | | | | | 1 | | | | |
| *Stictochironomus* cf. *histrio* (Fabr.) | | | | | | | | 2 | | | | | | | | |
| *Stictochironomus* sp. deformed | | | | | | | 1* | | | | | | | | | |
| *Stylaria fossularis* Leidy | | | | | | | | | 9 | | | | | | | |
| *Tanytarsinae indet.*, deformed | 1* | | | | | | | | | | | | | | | |
| *Tanytarsus* spp. | 1 | 1 | 1 | | 1 | | 13 | 16 | 10 | | 2 | | | 1 | | |
| Genus near *Trissocladius* | | | 2 | | 2 | | | | | | | 1 | | | | |
| *Tubifex tubifex* (Mull.) | 2(2) | 4(2) | 150(8) | | 8(3) | 32(6) | 4(4) | 13(3) | 24(4) | | 2(2) | 5(2) | | 16(4) | 20(4) | 4(4) |
| *Valvata sincera* Say | | | | | | | 1 | 10 | | | | | | | | |
| *Valvata* sp. | | | | | | | 1 | 8 | | | | | | | | |
| No. of specimens per sample | 17 | 36 | 217 | | 0 167 | 51 | 415 | 140 | 104 | 79 | 72 | 33 | 1 | 58 | 33 | 18 |

* Deformed specimens.

* Numbers in brackets: oligochaetes identified from mounted and/or mature specimens.

APPENDIX G-2

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OKANAGAN LAKE, 1969

| Station No. | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (m) | 20 | 2 | 6 | 13 | 19.5 | 33 | 87 | 13 | 75 | 117 | 5 | 19 | 2 | 78.5 | 24 | 4 |
| c=clay g=gyttja s=sand & shells and v=vegetation d= wood, debris, detritus | c<br>g | s<br>g | s<br>g | c<br>g | c<br>g | c<br>g | c<br>g | d<br>s | c | c | s<br>d | c | g<br>s | c | c | s<br>v |
| *Nais pardalis* | | | | | | 1(1) | | | | | | | | | | |
| *Nais variabilis* | | 7(7) | 1(1) | | | | | | | | | | | | | 28(4) |
| *Nematoda indet.* | 1 | 1 | | | 1 | 1 | | | 1 | | | | | | | |
| *Newmania (Newmania)* cf. *punctata* Marsh. | | | | | | | | | | | | | 1 | | | |
| *Ophidonais serpentina* (Mull.) | | | | | | | | | | | | | | | | |
| *Parachironomus* sp. | | | | 1 | | | | | | | | | | 1 | | 1 |
| *Paracladopelma* sp. | | | | 1 | | | | | | | | | | | | |
| *Phaenopsectra (Sergentia)* cf. "*Longiventris*" sensu Wulk | | | | | | 3 | | | | | | | | | | |
| *Phaenopsectra (Sergentia)* sp. nec. "*longiventris*" | | | | | | | | | | | | | | | | 15 |
| *Physa jennesi* Daws. | | | | | | | | | | | | | | | | |
| *Piona (Piona) interrupta* Marsh. | | | | | | | | | | | | | | | | |
| *Pisidium cassertanum* (Poli) | | | | | | | | | | | 1 | | | | | |
| *Pisidium compressum* Prime | 2 | | | | 4 | | | | | | 4 | 2 | | 1 | | 10 |
| *Planorbula campestris* Daws. | | 2 | | | | | | | | | | | | | | |
| *Polycentropus* sp. | | | | | | | | | | | | | | | | 1 |
| *Polypedium "tripodura" group* | | | | | | | | | | | | | | | | 1 |
| *Procladius (Psilotanypus)* spp. | | | | 1 | | | | | | | | | | | | |
| *Procladius (s. str.)* spp. | 1 | | 7 | 8 | | 1 | 1 | 6 | 4 | | 2 | | 2 | | 18 | 4 |
| *Protanypus* cf. *morio* (Zett.) | 2* | | | 1 | 1 | | 2 | | | 1 | | | | | 3 | |
| *Stictochironomus* cf. *histrio* (Febr.) | | | | | | | | | | | | | | | | 1 |
| *Stictochironomus* cf. *rosenscholdi* (Zett.) | 4 | 1 | | 7 | 8 | | 1 | | | | | | | | | |
| *Stylodrilus* cf. *heringianus* Clap. | | | | | | | 1(1) | | | 1(1) | | | | 1(1) | | |
| *Tanytarsus* spp. | | | | | | | | 1 | | | 4 | | | | 1 | |
| *Tubifex tubifex* (Mull.) | | 4(4) | 9(1) | 15(4) | 4(4) | 10(1) | | 6(1) | 1(1) | | | 1(1) | 87(5) | | 20(2) | 9(2) |
| *Turbellaria indet.* | | | | | 1 | | | | | | | | | | | |
| *Valvata sincera* Say | | | | | | | | | | | | | | | | 1 |
| *Zavrelia "Stempellinella"* group | | | 1 | | | | | | | | | | | | | |
| No. of specimens per sample | 15 | 32 | 32 | 45 | 34 | 118 | 7 | 53 | 8 | 5 | 32 | 34 | 162 | 6 | 69 | 155 |

*Deformed specimens.

*Numbers in brackets:oligochaetes identifed from mounted and/or mature specimens.

APPENDIX G-2

. . . CONTINUED

| | SKAHA LAKE, 1969 | | | | | OSOYOOS LAKE, 1969 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Station No. | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| Depth (m) | 11 | 41 | 48.5 | 5 | 14.5 | 14 | 36 | 44.5 | 28 | 1 |
| c=clay g=gyttja s=sand & shells and v= vegetation d=wood, debris, detritus | g<br>d[g] | g<br>c | g<br>c | s | g<br>c[s] | s<br>g | g<br>c | g<br>c | g<br>c | s<br>g |
| *Arcteonais lomondi* (Martin) | | | | | | 2(2) | | | | |
| *Chironomus plumosus* type | 5 | | | | 1 | 3 | | 2 | | 1 |
| *Chironomus salinarius* type | 2 | | | | | | | 46 | | |
| *Chironomus semireductus* type | 19* | | | 3 | 6 | 11 | | 1 | | 1 |
| *Heterotrissocladius* near *subpilosus* (K.) | | | | 1 | | | | | | |
| *Hyalella azteca* (Sarss.) | | | | 16 | | | | | | |
| *Hygrobates* (*Tetrabates*) *heooctoporus* Marsh. | | | | 2 | | | | | | |
| *Ilyodrilus templetoni* (South) | | | 3(1) | | | | | | | |
| *Kincaidiana hexatheca* Altm. | | | | 1(1) | | | | | | |
| *Limnodrilus* sp. | | | | | | | | | 29(14) | |
| *Limnodrilus claparedeanus* Ratz. | | | | | | 25(1) | | | | |
| *Limnodrilus hoffmeisteri* (Clap.) | 77(4) | 77(1) | 18(2) | 2(2) | 36(1) | 26(1) | 178(4) | 105(4) | | |
| *Micropsectra* sp. | | | | 1 | | | | 1 | | |
| *Nematoda idents.* | | | | | | 1 | | | 13 | |
| *Phaenosectra* (*Sergentia*) sp. (nec. "*longiventris*") | | | | 2 | | | | | | |
| *Pisidium ferrugineum* Prime | | | | 10 | | | | | | |
| *Procladius* (*Psilotanypus*) | 1* | | | | | | | | | |
| *Procladius* (*Psilotanypus*) spp. | 4 | | 1 | 1 | | 2 | | | | |
| *Procladius* (*s. str.*) spp. | | | | | | 4 | 9 | 12 | | |
| *Pseudochironomus* sp. | | | | 1 | | | | | | |
| *Stictochironomus* cf. *rosenscholdi* (Zett.) | | | | 1 | | | | | | |
| *Stictochironomus* | 1* | | | | | | | | | |
| *Tubifex tubifex* (Mull.) | 57(4) | 36(4) | 7(2) | 7(7) | 27(4) | 89(7) | 4(3) | 42(4) | 10(2) | 2(3) |
| No. of specimens per sample | 177 | 113 | 29 | 48 | 71 | 163 | 191 | 209 | 52 | 4 |

* Deformed specimens.

* Numbers in brackets: oligochaetes identified from mounted and/or mature specimens.

## APPENDIX G-3

NUMBER OF SPECIMENS COLLECTED IN TRIPLICATE SAMPLES (675CM$^2$)

IN WOOD, KALAMALKA AND SKAHA LAKES, (1971)

| | WOOD | | | | | KALAMALKA | | | | | | | | SKAHA | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Station No.<br>Depth m. | 1<br>1.3 | 2<br>5 | 3<br>31.3 | 4<br>6.3 | 5<br>1.5 | 6<br>1.5 | 7<br>18 | 8<br>13 | 9<br>2 | 10<br>37.6 | 11<br>2.5 | 12<br>13.4 | 13<br>100 | 14<br>1.2 | 15<br>11.4 | 16<br>52 | 17<br>1.5 | 18<br>13 | 19<br>38 |
| c= clay g= gyttja<br>s= sand & shells and<br>v= vegetation d= wood<br>debris, detritus | g<br>s<br>d | g<br>s<br>d | g | g<br>s | g<br>s | s<br>v<br>d | c<br>s | s<br>d | s<br>d | g | s<br>v | g<br>s<br>v | g | s | g<br>d | g | g<br>v<br>d | g<br>s | g |
| *Arcteonais lomondi* (Mart.) | | | | | | | | | | | | | | | | | | 3 | |
| *Aulodrilus limnobius* Bretsch. | | | | | | | 1 | 4 | | | | | | | | | | | |
| *Aulodrilus pigueti* Kow | | | | | | | | | | | | | | | | | 1 | | |
| Baetidae indet | | | | | 1 | | | | | | | | | | | | | | |
| *Bezzia* group | | | | | | | 1 | 3 | | | | | | | | | | | |
| *Bothrioneurum vejdovskyanum* Stolc | | | | | | | | | | | | | | 1 | 1 | | 1 | | |
| *Caenis* sp | | | | | 1 | | | | 1 | | | | | | | | | | |
| *Chelonarium* sp | | | | | | | 1 | | | | | | | | | | | | |
| *Chironomus* sp | | | | | | | | | 2 | | | | | | | | | | |
| *Chironomus anthracinus* type | 14 | 1 | 2 | 2 | | | 4 | 8 | 2 | | | 1 | | | | | | | |
| *Chironomus attenuatus* type | | | | | | | | | | | | | | | 10 | | 7 | 5 | |
| *Chironomus plumosus* type | 2 | | | 38 | 1 | | | 1 | | | | | | | | | 4 | 2 | |
| *Chironomus salinarius* type | | | | | | | | | | 9 | | 1 | | | | | | | |
| *Chironomus semireductus* type | | | | | | | | 1 | | | | | | | 10 | | 2 | 4 | 1 |
| *Cladotanytarsus* sp | | | | 1 | 53 | | 14 | | 9 | | 6 | 1 | | | | | 5 | | |
| Genus near *Cladotanytarsus* or *Rheotanytarsus* | | | | | | | | | 1 | | | | | | | | 2 | | |
| Coleoptera indet | | | | | | | | | | | | | | 1 | | | | | |
| *Cricotopus "Eucricotopus"* type | | | | | 2 | | | 2 | 1 | | | | | 1 | | 2 | | | |
| *Cricotopus "Paratrichocladius"* group | | | | | | 4 | 12 | 3 | | | | 4 | | | | | | | |
| *Cricotopus "Trichocladius"* type | | | | | | 1 | 2 | 1 | | | | | | | | | | | |
| *Cryptochironomus* sp | | | | | 4 | 1 | 2 | 2 | 3 | | 2 | | | 1 | | | 3 | | |
| *Cryptocladopelma* sp | | | | | | | 1 | | | | | | | | | | 1 | 1 | |
| *Cryptotendipes* sp | | | | | 1 | | | | | | | | | | | | | | |
| Cyclorrhapha indet. | | | | | | | | 1 | | | | | | | | | | | |
| *Dero digitata* (Müll) | | | | 4 | | | | | | | | | | | 21(20) | | 8(6) | 2 | |
| *Dicrotendipes* sp. | | | | | 8 | | 2 | | | | 1 | | | | | 1 | 1 | | |
| Empididae indet | | | | | 1 | | | 1 | | | | | | | | | | | |
| Enchytraeidae indet | | | | | 1 | | 1 | 8 | | | 1 | | | | | | | | |
| *Glyptotendipes (Phytotendipes)* sp | | | | | | | | | 4 | | | 1 | | | | | | | |
| *Harnischia curtilamellata* (Mall.) | | | | | | | 1 | | | | | | | | | | | | |

* Numbers in brackets = oligochaetes identified to species with certainty.

## APPENDIX G-3

. . . CONTINUED

| | WOOD | | | | | KALAMALKA | | | | | | | | SKAHA | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Station No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| Depth m. | 1.3 | 5 | 31.3 | 6.3 | 1.5 | 1.5 | 18 | 13 | 2 | 37.6 | 2.5 | 13.4 | 100 | 1.2 | 11.4 | 52 | 1.5 | 13 | 38 |
| c= clay g= gyttja s= sand & shells and v= vegetation d= wood, debris, detritus | g s d | g s d | g | g s | g s | s v d | c s | s d | s d | g | s v | g s v | g | s | g d | g | g v d | g s | g |
| *Hellobdella stagnalis* (L.) | | | | | | | 3 | | 1 | | | | | | | | | | |
| *Heterotrissocladius* f.l. *subpilosus* (Kieff) | | | | | | 1 | | | | | 1 | | | | 1 | 1 | | | |
| *Hexagenia limbata* (Serv.) | | | | | | | | | | | | | | | | | 4 | | |
| *Hyalella azteca* (Sauss.) | | | | | 1 | | | | 3 | | | | | | | | | | |
| Hydracarina indet | | | | | 4 | | | | | | | | | | | | | | |
| *Ilyodrilus perrieri* Eis. | | | | | | | | | 1 | | | | | | | | | | |
| *Ilyodrilus tempetoni* (South.) | 1 | | | 10 | | | 13 | 17 | 11 | 3 | 4 | 1 | | 7 | 9 | | 30 | 10 | 4 |
| *Limnodrilus claparedeianus* Ratz. | | | | 2(1) | | 2(1) | | | | | | | | | 66(17) | | 4(2) | 4(1) | 11(2) |
| *Limnodrilus hoffmeisteri* Clap. | 1 | | | | 2(1) | | 11(4) | 2(1) | | | | | | 9(3) | 251(65) | 104(2) | 28(13) | 25(6) | 17(3) |
| *Limnodrilus hoffmeisteri* (v.) | 3(2) | | | 14(8) | 4(2) | | 2(1) | 30(12) | 1 | 3(2) | | | 7(1) | | 69(18) | | 4(2) | 38(9) | 169(30) |
| *Limnodrilus profundicola* (Verr.) | | | | | | | | | | | | | | | | | 2(1) | | 11(2) |
| Lumbricidae indet? | | | | | | | | 3 | | | | | | | | | | | |
| *Monodiamesa* f.l. *bathyphila* (Kieff.) | | | | | | | | | | | | 1 | | | 2 | | | | |
| *Mysis relicta* Lov. | | | | | | | | | | | | 1 | | | | | | | |
| Naididae indet. | 1 | | | 4 | | | | | 1 | | | | | 3 | 18 | | 14 | 7 | |
| *Nais barbata* Müll | | | | | | | | | | | | | | | | | 1 | | |
| *Nais elinguis* Müll | | | | | | | 3 | | | | | | | 1 | 1 | 1 | | | 2 |
| *Nais paradalis* Pig. | | | | | | | | | | | | | | | | | 1 | | |
| *Nais pseudobtusa* Pig. | | | | | | | | | | | | | | | 1 | | 1 | | |
| *Nais variabilis* Pig. | | | | | | | | | | | | | | | 1 | | 10 | | 1 |
| *Narpus* sp | | | | | | | | 1 | | | | | | | | | | | |
| Nematoda indet | | | 7 | 2 | 2 | | 1 | 1 | 1 | | | 1 | 8 | 1 | 1 | 798 | 2 | 15 | 3 |
| *Ophidonais serpentina* (Mull.) | | | | | | | 4 | 8 | | | 1 | | | | 1 | | | | |
| *Opticervus* sp | | | | | | | | 1 | | | | | | | | | | | |
| *Paracladopelma* sp | | | | 1 | | | | | | | 1 | | 1 | | 1 | | | | |
| "*Parakiefferiella coronata*" | | | | | | | 1 | 1 | | | | | | | | | | | |
| "*Parakiefferiella nigra*" | | | | | | | | | | | | 13 | | | | | | | |
| *Paral auter borniella nigrohalterale* (Müll) | | | | | 1 | | | | | | | | | | | | 1 | | |
| *Paratanytarsus* sp | | | | | 2 | | | | | | | | | | 1 | | | | |
| *Paratendipes* sp | | | | | 16 | | 1 | | | | | | | | | | | | |

* Numbers in brackets = oligochaetes identified to species with certainty.

## APPENDIX G-3

. . . CONTINUED

| | WOOD | | | | | KALAMALKA | | | | | | | | SKAHA | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Station No.<br>Depth m. | 1<br>1.3 | 2<br>5 | 3<br>31.3 | 4<br>6.3 | 5<br>1.5 | 6<br>1.5 | 7<br>18 | 8<br>13 | 9<br>2 | 10<br>37.6 | 11<br>2.5 | 12<br>13.4 | 13<br>100 | 14<br>1.2 | 15<br>11.4 | 16<br>52 | 17<br>1.5 | 18<br>13 | 19<br>38 |
| c= clay, g= gyttja<br>s= sand & shells and<br>v= vegetation d= wood,<br>debris and detritus | g<br>s<br>d | g<br>s<br>d | g | g<br>s | g<br>s | s<br>v<br>d | c<br>s | s<br>d | s<br>d | g | s<br>v | g<br>s<br>v | g | s | g<br>d | g | g<br>v<br>d | g<br>s | g |
| *Phaenopsectra* (*Sergentia*) | | | | | | | | 1 | | | | | | 1 | 2 | 4 | | 2 | 2 |
| *Phaenopsectra* (*Tribelos*) | | | | 12 | 3 | | 1 | | | | | | | | | | 1 | 2 | 1 |
| *Pisidium* sp | | | | | | | | 5 | | | | | | | | | | | |
| *Plea* of *striola* Fieb. | | | | | | | | | | | | | | | | | | 1 | |
| Genus near *Polypedilum* | | | | | | | | | | | | | | | | 1 | | | |
| *Polypedilum* (*Polypedilum*) sp. | | | | | | | | 1 | | | | | | | | | | | |
| *Polypedilum* (*Tripodura*) of *scalaneum* (Schaenk.) | | | | | 1 | | 1 | | | | | | | | | | | | |
| *Polypedilum* (*Tripodura*) of *simulans* (Townes) | | | | | 1 | | | | | | | | | | | | | | |
| *Potthastia* of *longimanus* (Kieff.) | | | | | | | | | | | 1 | | | | | | | | |
| *Pristina foreli* (Pig.) | | | | | | | | | | | | | | | | | 1 | | |
| *Procladius* (*Procladius*) spp. | | | | 4 | 1 | 2 | 6 | 3 | 8 | | 2 | 2 | | 3 | 34 | | 27 | 35 | 2 |
| *Procladius* (*Psilotanypus*) sp. | | | | | | 1 | | | | | | | | | 6 | | 3 | 2 | |
| *Protanypus* cf *morio* (Zett.) | | | | | | | | | | 2 | | | 2 | | | | | | |
| *Prodiamesa* of *olivacea* (Meig.) | | | | | | | | 9 | | | | | | | | | | | |
| *Psectrocladius* (*Psectrocladius*) sp | | | | | | | | | | | | 1 | | | | | | | |
| *Psectrocladius* (*Psectrocladius*) octomaculatus type | | | | | | | 1 | | | | | | | | | | | | |
| *Psectrocladius* (*Psectrocladius*) schlienzi type | | | | | | | 1 | | | | | | | | | | | | |
| *Pseudochironomus* sp | | | | | 2 | | | | | | | | | | | | | | |
| *Slavina appendiculata* Udek | | | | | | | | | | | | | | | 1 | | | 1 | |
| *Slavina* sp n(or subsp.n?) | | | | | | | | | | | | | | 5 | 9 | | 37 | | |
| *Stempellinella* | | | | | 1 | | 7 | 1 | 9 | 1 | 2 | 2 | | | | | 4 | | |
| *Stictochironomus histrio* type | | | | | | | | 1 | | | 2 | | | | | | | | |
| Stratiomyidae indet | | | | | | | | 1 | | | | | | | | | | | |
| *Tanytarsus* sp | 1 | | | 3 | 1 | | 21 | 7 | 13 | 6 | 6 | 4 | | | 9 | 2 | 32 | | 1 |
| *Thienemanniella* sp | | | | | 3 | | 1 | 2 | | | | | | | | | | | |
| *Thienemannimyia* group | | | | | | | | 1 | | | | | | | | | | | |
| Trichoptera indet | | | | | | | | | 1 | | | | | | | | | | |
| Genus near *Trisocladius* (Mull) | | | | | | | 5 | 1 | 1 | 26 | | 25 | 5 | | | | | | |
| *Tubifex tubifex* (Mull) | | | 3(0) | | | | 4(0) | 66(24) | 4(0) | 2(0) | 1(1) | 3(0) | | 13(0) | 47(17) | 440(92) | 44(0) | 64(3) | 251(9) |
| *Uncinais uncinata* (Ørst) | | | | | 1 | | | | | | 1 | | | | 1 | | | 2 | |
| *Vejdovskyella comata* (Vejd.) | | | | | | | | | | | | | | 1 | 2 | | 1 | 1 | 2 |

* Numbers in brackets = oligochaetes identified to species with certainty.

# APPENDIX G-4

## PICTORIAL PRESENTATION OF DEGREE OF ENRICHMENT AS INDICATED BY DISTRIBUTION OF OLIGOCAETA AND CHIRONOMIDAE IN MAIN VALLEY LAKES, 1969 and 1971

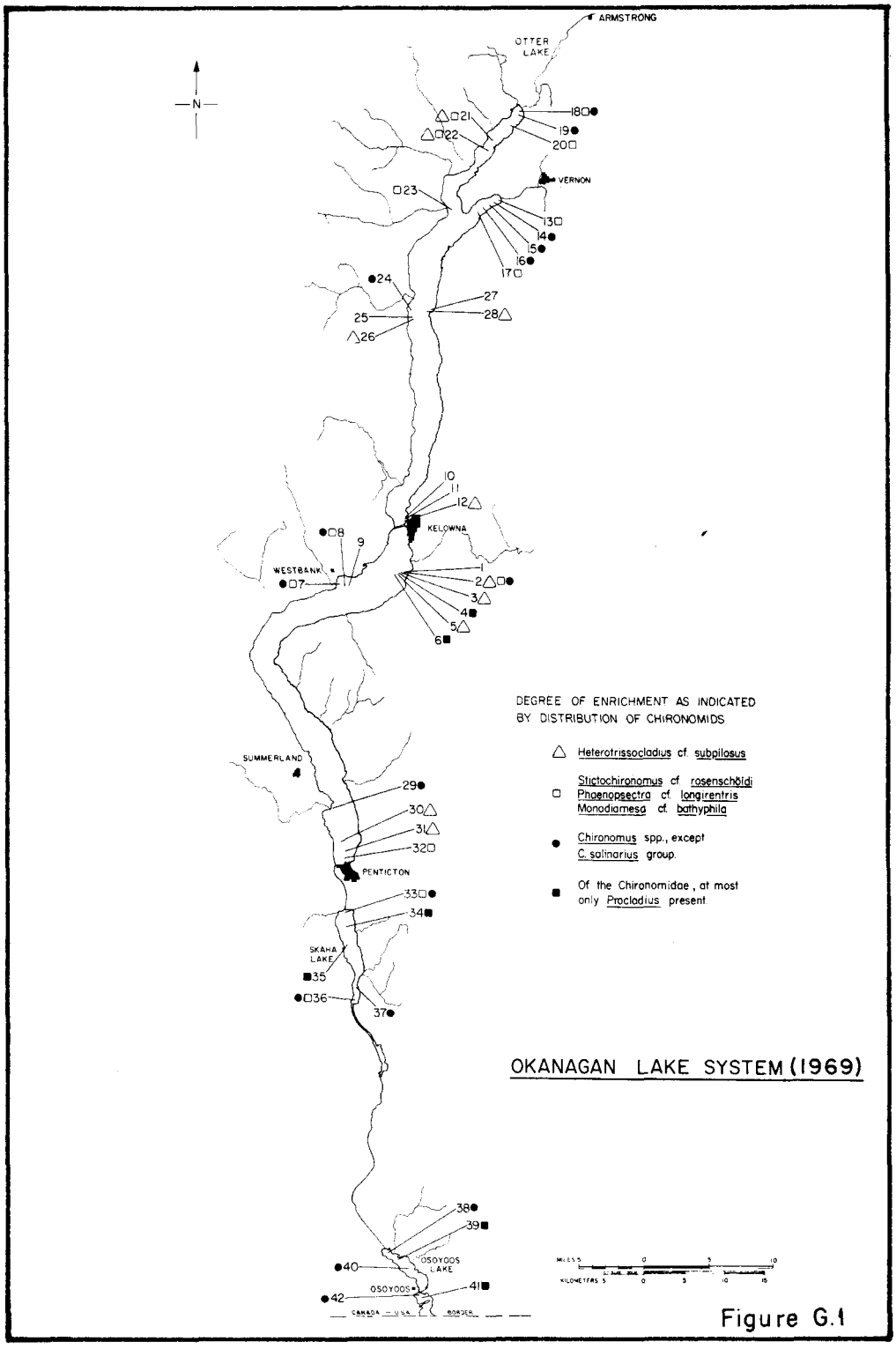
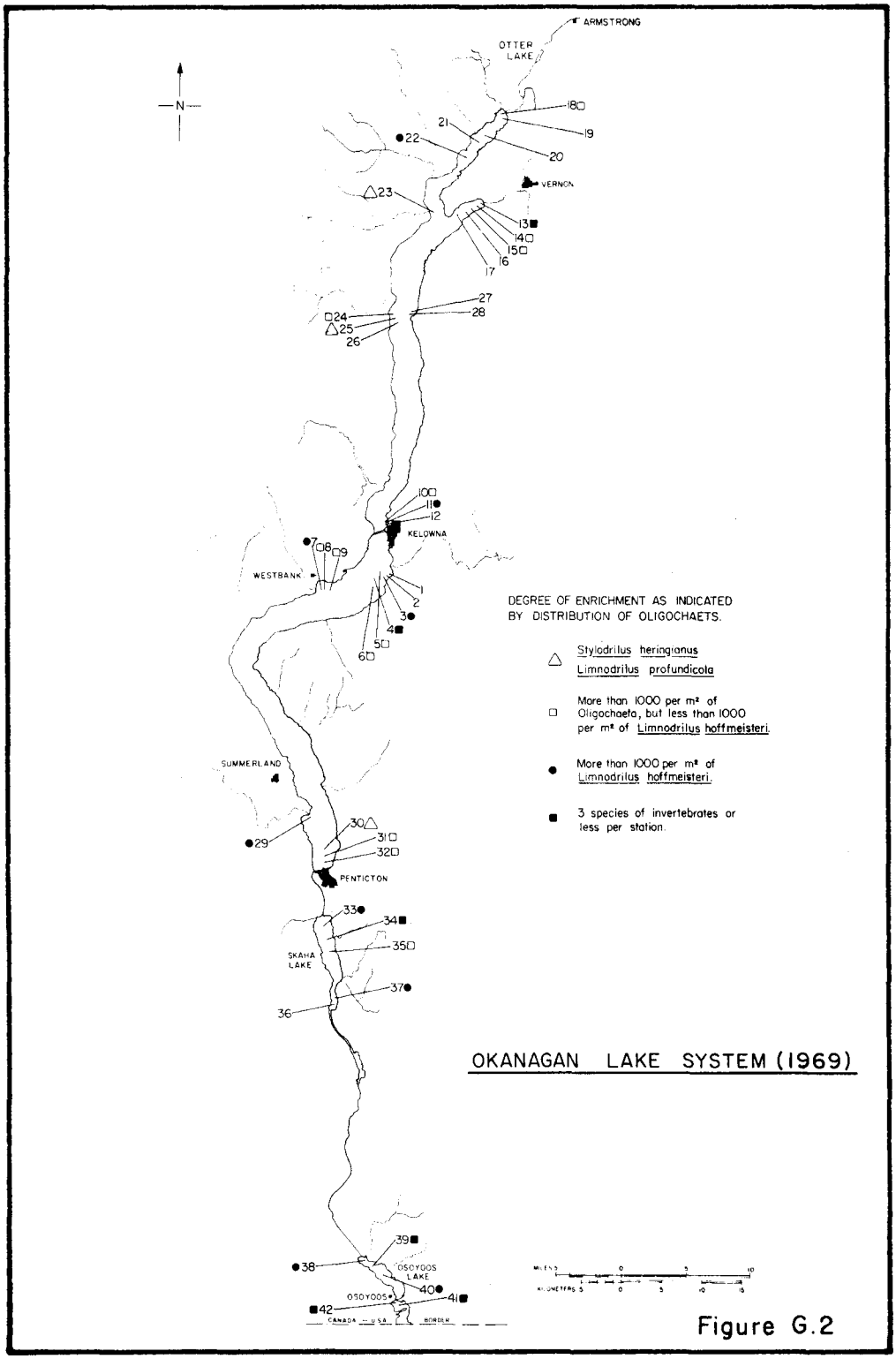
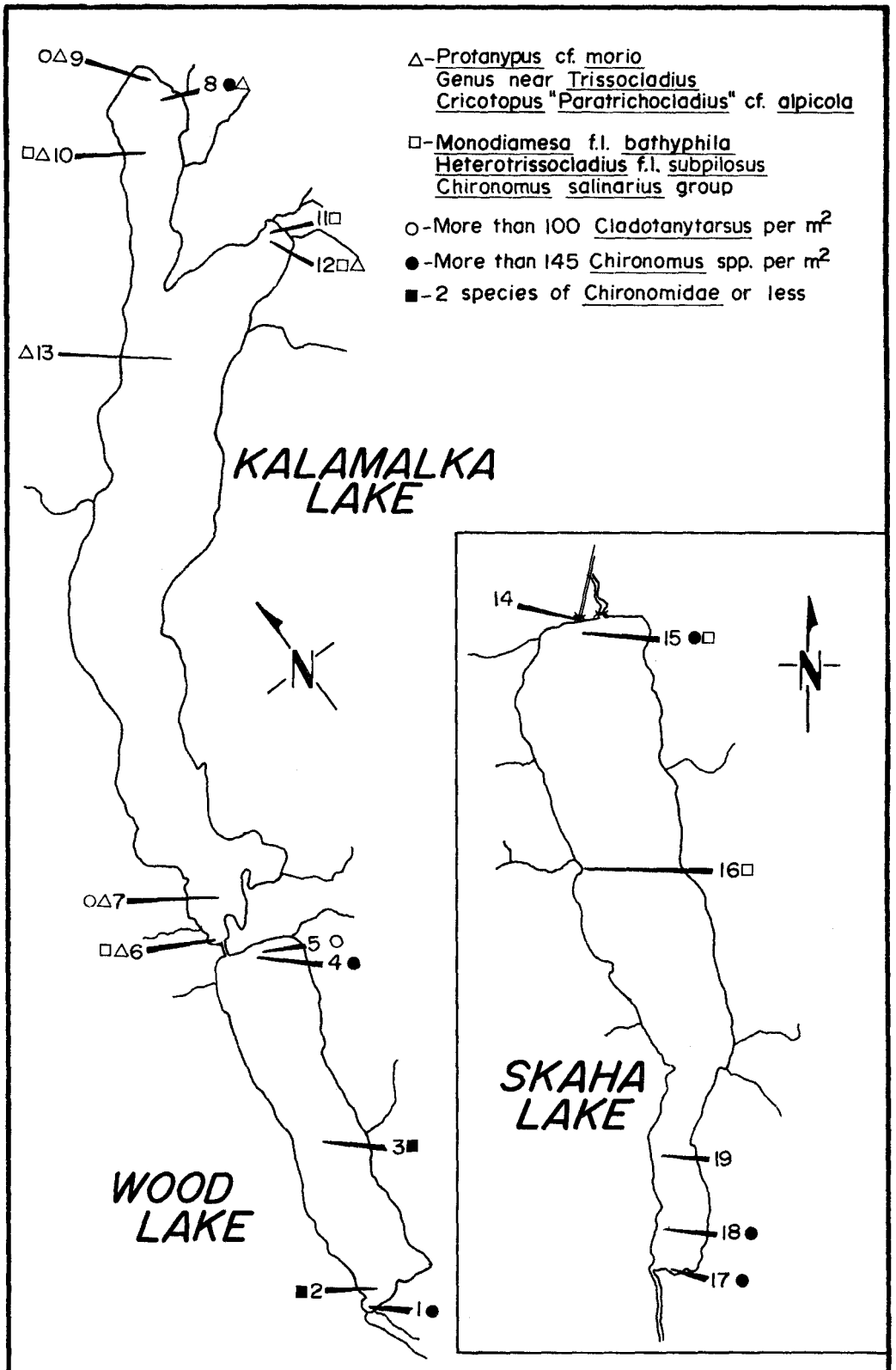



Figure G.1

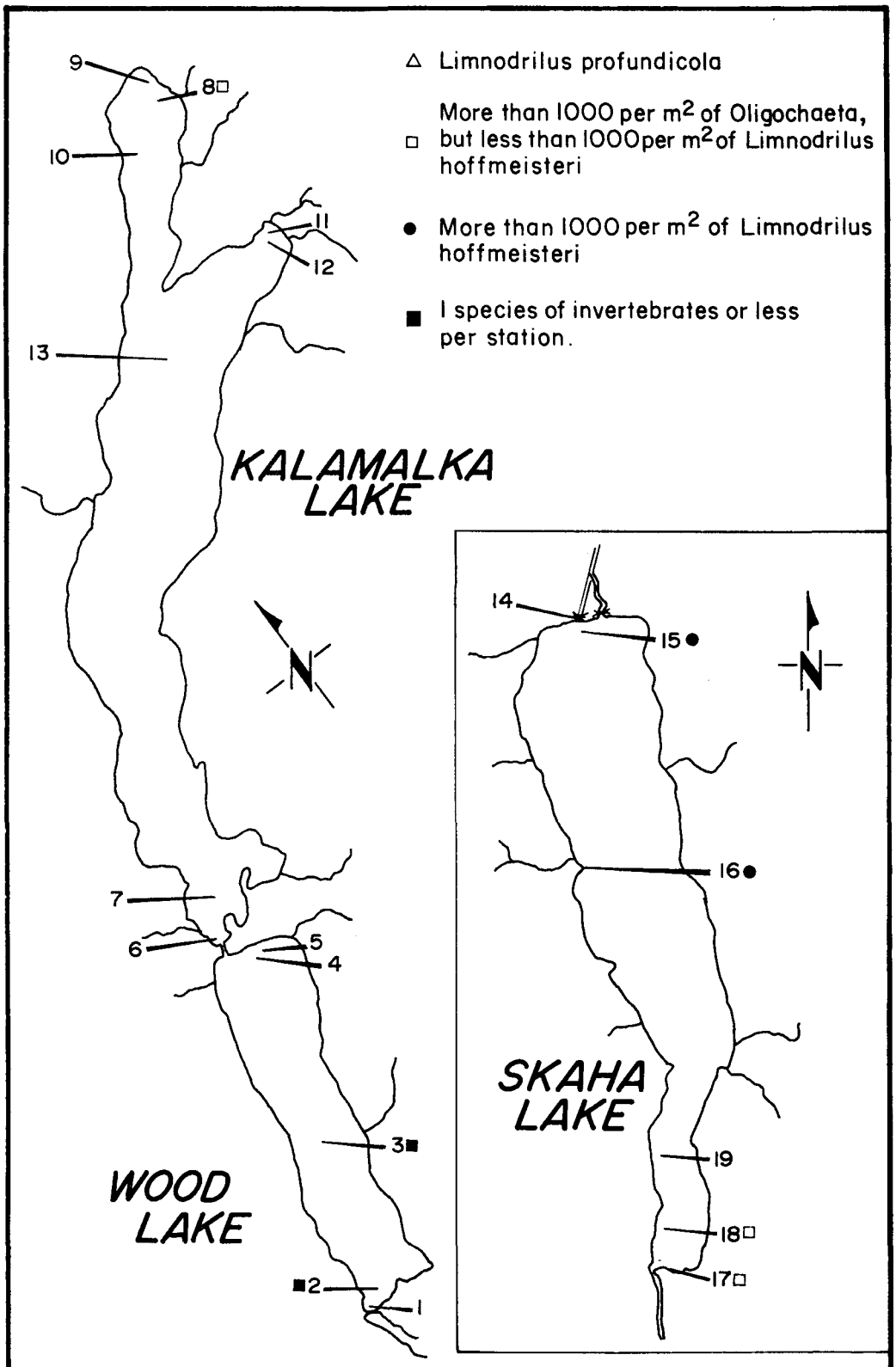



OKANAGAN LAKE SYSTEM (1969)

Figure G.2




DEGREE OF ENRICHMENT AS INDICATED BY DISTRIBUTION OF CHIRONOMIDAE, 1971 Figure G.3




DEGREE OF ENRICHMENT AS INDICATED BY DISTRIBUTION OF OLIGOCHAETA, 1971. Figure G.4