Appendix A

# Taxonomic List of Benthic Macrofauna Identified from Monitoring Samples

# Taxonomic List of Benthic Macrofauna Identified from Monitoring Samples

| ORG NUM | PHYLUM | FAMILY | GENUS | SPECIES | FULL TAXONOMIC NAME |
|---|---|---|---|---|---|
| 000 | NONE | NONE | NONE | NONE | NOTHING IN SAMPLE |
| 100 | CNID | HYDR | HYDR | SP A | CNIDARIA HYDRIDAE HYDRA SPECIES A |
| 101 | PLAT | PLAN | DUGE | TIGR | PLATYHELMINTHES PLANARIIDAE DUGESIA TIGRINA |
| 103 | PLAT | UNKN | TRIC | SP A | PLATYHELMINTHES UNKNOWN UID TRICLAD SPECIES A |
| 105 | PLAT | UNKN | TRIC | SP B | PLATYHELMINTHES UNKNOWN UID TRICLAD SPECIES B |
| 107 | PLAT | UNKN | TRIC | SP C | PLATYHELMINTHES UNKNOWN UID TRICLAD SPECIES C |
| 109 | PLAT | UNKN | TURB | SP A | PLATYHELMINTHES UNKNOWN MICROTURBELLARIAN SPECIES A |
| 111 | NEME | UNKN | PALE | SP A | NEMERTEA UNKNOWN UID PALEONEMERTEAN SPECIES A |
| 113 | NEME | TERT | PROS | GRAE | NEMERTEA TERTASTEMMATIDAE PROSTOMA GRAECENSE |
| 115 | NEME | UNKN | NEME | SP A | NEMERTEA UNKNOWN UID NEMERTEAN SPECIES A |
| 121 | NEMA | PLEC | TERA | SP A | NEMATODA PLECTIDAE TERATOCEPHALUS SPECIES A |
| 123 | NEMA | DORY | DORY | SP A | NEMATODA DORYLAIMIDAE DORYLAIMUS SPECIES A |
| 125 | NEMA | DORY | EUDO | SP A | NEMATODA DORYLAIMIDAE EUDORYLAIMUS SPECIES A |
| 127 | NEMA | DORY | ACTI | SP A | NEMATODA DORYLAIMIDAE UID ACTINOLAIMINAE SPECIES A |
| 129 | NEMA | UNKN | NEMA | SP A | NEMATODA UNKNOWN UID NEMATODA SPECIES A |
| 201 | ANNE | NAID | BRAT | BILO | ANNELIDA NAIDIDAE BRATISLAVIA BILONGATA |
| 203 | ANNE | NAID | CHAE | DIAP | ANNELIDA NAIDIDAE CHAETOGASTER DIAPHANUS |
| 205 | ANNE | NAID | CHAE | LIMI | ANNELIDA NAIDIDAE CHAETOGASTER LIMNAEI |
| 207 | ANNE | NAID | DERO | DIGI | ANNELIDA NAIDIDAE DERO DIGITATA |
| 209 | ANNE | NAID | DERO | TRIF | ANNELIDA NAIDIDAE DERO TRIFIDA |
| 211 | ANNE | NAID | NAIS | COMM | ANNELIDA NAIDIDAE NAIS COMMUNIS/VARIABILIS |
| 213 | ANNE | NAID | NAIS | PARD | ANNELIDA NAIDIDAE NAIS PARDALIS |
| 215 | ANNE | NAID | NAIS | PSEU | ANNELIDA NAIDIDAE NAIS PSEUDOBTUSA |
| 217 | ANNE | NAID | NAIS | SIMP | ANNELIDA NAIDIDAE NAIS SIMPLEX |
| 219 | ANNE | NAID | OPHI | SERP | ANNELIDA NAIDIDAE OPHIDONAIS SERPENTINA |
| 221 | ANNE | NAID | PARN | FRIC | ANNELIDA NAIDIDAE PARANAIS FRICI |
| 223 | ANNE | NAID | PRIS | BREV | ANNELIDA NAIDIDAE PRISTINA BREVISETA |
| 225 | ANNE | NAID | PRIS | LONS | ANNELIDA NAIDIDAE PRISTINA LONGISETA |
| 227 | ANNE | NAID | SLAV | APPE | ANNELIDA NAIDIDAE SLAVINA APPENDICULATA |
| 229 | ANNE | NAID | STYL | LACU | ANNELIDA NAIDIDAE STYLARIA LACUSTRIS |
| 231 | ANNE | NAID | VEJD | COMA | ANNELIDA NAIDIDAE VEJDOVSKYELLA COMATA |
| 233 | ANNE | NAID | VEJD | INTE | ANNELIDA NAIDIDAE VEJDOVSKYELLA INTERMEDIA |
| 241 | ANNE | TUBI | AULO | LIMM | ANNELIDA TUBIFICIDAE AULODRILUS LIMNOBIUS |
| 243 | ANNE | TUBI | AULO | PIGU | ANNELIDA TUBIFICIDAE AULODRILUS PIGUETI |
| 245 | ANNE | TUBI | AULO | PLUR | ANNELIDA TUBIFICIDAE AULODRILUS PLURISETA |
| 247 | ANNE | TUBI | BOTH | VEJO | ANNELIDA TUBIFICIDAE BOTHRIONEURUM VEJDOVSKYANUM |
| 249 | ANNE | TUBI | BRAN | SOWE | ANNELIDA TUBIFICIDAE BRANCHIURA SOWERBYI |
| 251 | ANNE | TUBI | ILYO | FRAT | ANNELIDA TUBIFICIDAE ILYODRILUS FRANTZI CAPILLATUS |
| 253 | ANNE | TUBI | ILYO | TEMP | ANNELIDA TUBIFICIDAE ILYODRILUS TEMPLETONI |
| 255 | ANNE | TUBI | LIMO | HOFF | ANNELIDA TUBIFICIDAE LIMNODRILUS HOFFMEISTERI |
| 257 | ANNE | TUBI | LIMO | UDEK | ANNELIDA TUBIFICIDAE LIMNODRILUS UDEKEMIANUS |
| 259 | ANNE | TUBI | POTX | BAVA | ANNELIDA TUBIFICIDAE POTAMOTHRIX BAVARICUS |
| 261 | ANNE | TUBI | PSAM | CALF | ANNELIDA TUBIFICIDAE PSAMMORYCTIDES CALIFORNIANUS |
| 263 | ANNE | TUBI | QUIS | MULT | ANNELIDA TUBIFICIDAE QUISTADRILUS MULTISETOSUS |
| 265 | ANNE | TUBI | SPIR | FERO | ANNELIDA TUBIFICIDAE SPIROSPERMA FEROX |
| 267 | ANNE | TUBI | TENE | MAST | ANNELIDA TUBIFICIDAE TENERIDRILUS MASTIX |

| ORG NUM | PHYLUM | FAMILY | GENUS | SPECIES | FULL TAXONOMIC NAME |
|---|---|---|---|---|---|
| 269 | ANNE | TUBI | TUBF | BROW | ANNELIDA TUBIFICIDAE TUBIFICOIDES BROWNAE |
| 271 | ANNE | TUBI | TUBF | FRAS | ANNELIDA TUBIFICIDAE TUBIFICOIDES FRASERI |
| 272 | ANNE | TUBI | TUBF | SP A | ANNELIDA TUBIFICIDAE TUBIFICOIDES SPECIES A |
| 273 | ANNE | TUBI | VARI | ANGU | ANNELIDA TUBIFICIDAE VARICHAETADRILUS ANGUSTIPENIS |
| 275 | ANNE | TUBI | TUBD | SP A | ANNELIDA TUBIFICIDAE UID TUBIFICID SPECIES A |
| 277 | ANNE | ENCH | ENCH | SP A | ANNELIDA ENCHYTRAEIDAE UID ENCHYTRAEID SPECIES A |
| 279 | ANNE | ENCH | ENCH | SP B | ANNELIDA ENCHYTRAEIDAE UID ENCHYTRAEID SPECIES B |
| 281 | ANNE | GLOS | SPAR | EISE | ANNELIDA GLOSSOSCOLECIDAE SPARGANOPHILUS EISENI |
| 283 | ANNE | MEGA | MEGA | SP A | ANNELIDA MEGASCOLECIDAE UID MEGASCOLECID SPECIES A |
| 285 | ANNE | LUMB | LUBR | VARE | ANNELIDA LUMBRICULIDAE LUMBRICULUS VARIEGATUS |
| 287 | ANNE | LUMB | LUBR | SP A | ANNELIDA LUMBRICULIDAE LUMBRICULUS SPECIES A |
| 289 | ANNE | BRAN | CAMB | SP A | ANNELIDA BRANCHIOBDELLIDAE CAMBARINCOLA SPECIES A |
| 291 | ANNE | GLOP | HELO | STAG | ANNELIDA GLOSSIPHONIIDAE HELOBDELLA STAGNALIS |
| 293 | ANNE | GLOP | HELO | TRIS | ANNELIDA GLOSSIPHONIIDAE HELOBDELLA TRISERIALIS |
| 295 | ANNE | GLOP | PLAC | MONT | ANNELIDA GLOSSIPHONIIDAE PLACOBDELLA MONTANA |
| 297 | ANNE | ERPO | MOOR | MICR | ANNELIDA ERPOBDELLIDAE MOOREOBDELLA MICROSTOMA |
| 301 | ANNE | LUMN | LUMN | SP A | ANNELIDA LUMBRINERIDAE LUMBRINERIS SPECIES A |
| 303 | ANNE | ORBI | HAPL | ELON | ANNELIDA ORBINIIDAE HAPLOSCOLOPLOS ELONGATUS |
| 305 | ANNE | SPIO | BOCC | LIGE | ANNELIDA SPIONIDAE BOCCARDIA LIGERICA |
| 307 | ANNE | SPIO | POLD | LIGN | ANNELIDA SPIONIDAE POLYDORA LIGNI |
| 309 | ANNE | SPIO | PSED | KEMP | ANNELIDA SPIONIDAE PSEUDOPOLYDORA KEMPI |
| 311 | ANNE | SPIO | STRE | BENE | ANNELIDA SPIONIDAE STREBLOSPIO BENEDICTI |
| 313 | ANNE | SPIO | SPIO | SP A | ANNELIDA SPIONIDAE UID SPIONID SPECIES A |
| 315 | ANNE | CIRR | CIRR | SPIR | ANNELIDA CIRRATULIDAE CIRRIFORMIA SPIRABRANCHA |
| 317 | ANNE | CAPI | HETE | FILI | ANNELIDA CAPITELLIDAE HETEROMASTUS FILIFORMIS |
| 319 | ANNE | MALD | ASYC | ELON | ANNELIDA MALDANIDAE ASYCHIS ELONGATA |
| 321 | ANNE | NEPH | NEPH | CAEC | ANNELIDA NEPHTYIDAE NEPHTYS CAECOIDES |
| 323 | ANNE | NEPH | NEPH | CORN | ANNELIDA NEPHTYIDAE NEPHTYS CORNUTA FRANCISCANA |
| 325 | ANNE | PHYL | ETEO | CALI | ANNELIDA PHYLLODOCIDAE ETEONE CALIFORNICA |
| 327 | ANNE | PHYL | ETEO | LIGH | ANNELIDA PHYLLODOCIDAE ETEONE LIGHTI |
| 329 | ANNE | SYLL | SPHR | CALI | ANNELIDA SYLLIDAE SPHAEROSYLLIS CALIFORNIENSIS |
| 331 | ANNE | POLY | HARM | IMBR | ANNELIDA POLYNOIDAE HARMOTHOE IMBRICATA |
| 333 | ANNE | NERE | NERI | LIMN | ANNELIDA NEREIDAE NEREIS LIMNICOLA |
| 335 | ANNE | NERE | NERI | PROC | ANNELIDA NEREIDAE NEREIS PROCERA |
| 337 | ANNE | NERE | NERI | SUCC | ANNELIDA NEREIDAE NEREIS SUCCINEA |
| 339 | ANNE | GONI | GLYC | ARMI | ANNELIDA GONIADIDAE GLYCINDE ARMIGERA |
| 341 | ANNE | SABE | FABR | BERK | ANNELIDA SABELLIDAE FABRICIA BERKELEYI |
| 343 | ANNE | SABE | MANA | SPEC | ANNELIDA SABELLIDAE MANAYUNKIA SPECIOSA |
| 345 | ANNE | SABE | POTM | SP A | ANNELIDA SABELLIDAE POTAMILLA SPECIES A |
| 401 | ARTH | CYPR | EUCY | SP A | ARTHROPODA CYPRIDIDAE EUCYPRIS SPECIES A |
| 403 | ARTH | CYPR | ISOC | SP A | ARTHROPODA CYPRIDIDAE ISOCYPRIS SPECIES A |
| 405 | ARTH | CAND | CAND | SP A | ARTHROPODA CANDONIDAE CANDONA SPECIES A |
| 407 | ARTH | CYLI | SARS | ZOST | ARTHROPODA CYLINDROLEBERIDIDAE SARSIELLA ZOSTERICOLA |
| 409 | ARTH | CYTH | CYPR | SP A | ARTHROPODA CYTHERIDAE CYPRIDEIS SPECIES A |
| 411 | ARTH | MYSI | NEOM | MERC | ARTHROPODA MYSIDAE NEOMYSIS MERCEDIS |
| 415 | ARTH | BALA | BALA | IMPR | ARTHROPODA BALANIDAE BALANUS IMPROVISUS |
| 421 | ARTH | NANN | CUME | VULG | ARTHROPODA NANNASTACIDAE CUMELLA VULGARIS |
| 423 | ARTH | LEUC | HEMI | HINU | ARTHROPODA LEUCONIDAE HEMILEUCON HINUMENSIS |
| 427 | ARTH | TANA | TANA | SP A | ARTHROPODA TANAIDAE TANAIS SPECIES A |
| 431 | ARTH | IDOT | SYNI | LATI | ARTHROPODA IDOTEIDAE SYNIDOTEA LATICAUDA |
| 433 | ARTH | ASEL | ASEL | OCCI | ARTHROPODA ASELLIDAE ASELLUS OCCIDENTALIS |

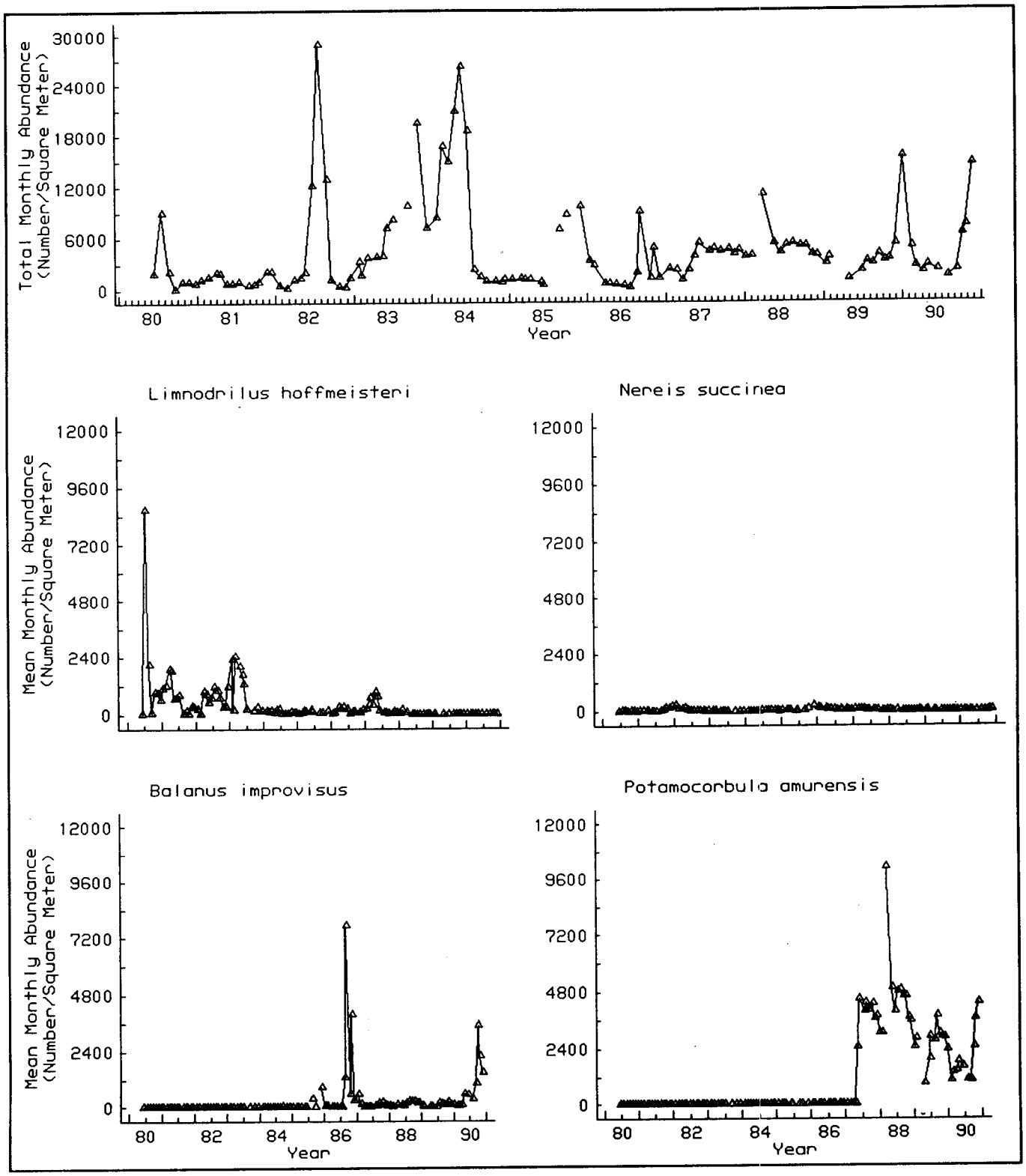
| ORG NUM | PHYLUM | FAMILY | GENUS | SPECIES | FULL TAXONOMIC NAME |
|---|---|---|---|---|---|
| 435 | ARTH | SPHA | GNOR | INSU | ARTHROPODA SPHAEROMATIDAE GNORIMOSPHAEROMA INSULARE |
| 437 | ARTH | SPHA | GNOR | OREG | ARTHROPODA SPHAEROMATIDAE GNORIMOSPHAEROMA OREGONENSIS |
| 439 | ARTH | SPHA | SPRO | PENT | ARTHROPODA SPHAEROMATIDAE SPHAEROMA PENTODON |
| 441 | ARTH | MUNN | MUNN | SP A | ARTHROPODA MUNNIDAE UID MUNNID SPECIES A |
| 451 | ARTH | AMPE | AMPE | ABDI | ARTHROPODA AMPELISCIDAE AMPELISCA ABDITA |
| 453 | ARTH | CORO | CORO | ACHE | ARTHROPODA COROPHIIDAE COROPHIUM ACHERUSICUM |
| 455 | ARTH | CORO | CORO | ALIE | ARTHROPODA COROPHIIDAE COROPHIUM ALIENENSE |
| 457 | ARTH | CORO | CORO | INSI | ARTHROPODA COROPHIIDAE COROPHIUM INSIDIOSUM |
| 459 | ARTH | CORO | CORO | OAKL | ARTHROPODA COROPHIIDAE COROPHIUM OAKLANDENSE |
| 461 | ARTH | CORO | CORO | SPIN | ARTHROPODA COROPHIIDAE COROPHIUM SPINICORNE |
| 463 | ARTH | CORO | CORO | STIM | ARTHROPODA COROPHIIDAE COROPHIUM STIMPSONI |
| 465 | ARTH | CORO | CORO | HETE | ARTHROPODA COROPHIIDAE COROPHIUM HETEROCERATUM |
| 467 | ARTH | CORO | GRAN | JAPO | ARTHROPODA COROPHIIDAE GRANDIDIERELLA JAPONICA |
| 471 | ARTH | PHOX | PARX | MILL | ARTHROPODA PHOXOCEPHALIDAE PARAPHOXUS MILLERI |
| 473 | ARTH | PLEU | PARP | PUGE | ARTHROPODA PLEUSTIDAE PARAPLEUSTES PUGETTENSIS |
| 475 | ARTH | GAMM | GAMM | DAIB | ARTHROPODA GAMMARIDAE GAMMARUS DAIBERI |
| 477 | ARTH | GAMM | MELI | NITI | ARTHROPODA GAMMARIDAE MELITA NITIDA |
| 479 | ARTH | GAMM | ELAS | ANTE | ARTHROPODA GAMMARIDAE ELASMOPUS ANTENNATUS |
| 481 | ARTH | TALI | HYAL | AZTE | ARTHROPODA TALITRIDAE HYALELLA AZTECA |
| 483 | ARTH | CAPR | CAPR | SP A | ARTHROPODA CAPRELLIDAE CAPRELLA SPECIES A |
| 487 | ARTH | PALA | PALA | MACR | ARTHROPODA PALAEMONIDAE PALAEMON MACRODACTYLUS |
| 489 | ARTH | CRAN | CRAN | FRAN | ARTHROPODA CRANGONIDAE CRANGON FRANCISCORUM |
| 491 | ARTH | ASTA | PACI | LENI | ARTHROPODA ASTACIDAE PACIFASTACUS LENIUSCULUS |
| 493 | ARTH | CALL | UPOG | PUGE | ARTHROPODA CALLIANASSIDAE UPOGEBIA PUGETTENSIS |
| 495 | ARTH | XANT | RHIT | HARR | ARTHROPODA XANTHIDAE RHITHROPANOPEUS HARRISII |
| 497 | ARTH | GRAP | HEMG | NUDU | ARTHROPODA GRAPSIDAE HEMIGRAPSUS NUDUS |
| 499 | ARTH | MAJI | PYRO | TUBE | ARTHROPODA MAJIDAE PYROMAIA TUBERCULATA |
| 501 | ARTH | BAET | BAET | BICA | ARTHROPODA BAETIDAE BAETIS BICAUDATUS |
| 503 | ARTH | HEPT | HEPT | ROSE | ARTHROPODA HEPTAGENIIDAE HEPTAGENIA ROSEA |
| 505 | ARTH | LEPT | PARE | SP A | ARTHROPODA LEPTOPHLEBIIDAE PARALEPTOPHLEBIA SPECIES A |
| 507 | ARTH | EPHE | HEXA | LIMB | ARTHROPODA EPHEMERIDAE HEXAGENIA LIMBATA CALIFORNICA |
| 509 | ARTH | TRIC | TRYC | SP A | ARTHROPODA TRICORYTHIDAE TRICORYTHODES SPECIES A |
| 511 | ARTH | CAEN | CAEN | SIMU | ARTHROPODA CAENIDAE CAENIS SIMULANS |
| 513 | ARTH | GOMP | GOMP | OLIV | ARTHROPODA GOMPHIDAE GOMPHUS OLIVACEUS |
| 515 | ARTH | COEN | ZONI | EXCL | ARTHROPODA COENAGRIONIDAE ZONIAGRION EXCLAMATIONIS |
| 517 | ARTH | NAUC | AMBR | SP A | ARTHROPODA NAUCORIDAE AMBRYSUS SPECIES A |
| 519 | ARTH | CORI | CORI | INSC | ARTHROPODA CORIXIDAE CORISELLA INSCRIPTA |
| 521 | ARTH | CORI | TRIK | VERT | ARTHROPODA CORIXIDAE TRICHOCORIXA VERTICALIS |
| 523 | ARTH | HYDO | HYDO | SP A | ARTHROPODA HYDROPSYCHIDAE HYDROPSYCHE SPECIES A |
| 525 | ARTH | HYOP | HYOP | SP A | ARTHROPODA HYDROPTILIDAE HYDROPTILA SPECIES A |
| 527 | ARTH | HYOP | OXYE | SP A | ARTHROPODA HYDROPTILIDAE OXYETHIRA SPECIES A |
| 529 | ARTH | LEPC | NECT | GRAC | ARTHROPODA LEPTOCERIDAE NECTOPSYCHE GRACILIS |
| 531 | ARTH | LEPC | OECE | SP A | ARTHROPODA LEPTOCERIDAE OECETIS SPECIES A |
| 533 | ARTH | CHAO | CHAO | ALBA | ARTHROPODA CHAOBORIDAE CHAOBORUS ALBATUS |
| 541 | ARTH | CHIR | PROC | SP A | ARTHROPODA CHIRONOMIDAE PROCLADIUS SPECIES A |
| 543 | ARTH | CHIR | TANY | STEL | ARTHROPODA CHIRONOMIDAE TANYPUS STELLATUS |
| 545 | ARTH | CHIR | ABLA | SP A | ARTHROPODA CHIRONOMIDAE ABLABESMYIA SPECIES A |
| 547 | ARTH | CHIR | CLAD | SP A | ARTHROPODA CHIRONOMIDAE CLADOTANYTARSUS SPECIES A |
| 549 | ARTH | CHIR | MICR | SP A | ARTHROPODA CHIRONOMIDAE MICROPSECTRA SPECIES A |
| 551 | ARTH | CHIR | PARY | SP A | ARTHROPODA CHIRONOMIDAE PARATANYTARSUS SPECIES A |
| 553 | ARTH | CHIR | CHIR | ATTE | ARTHROPODA CHIRONOMIDAE CHIRONOMUS ATTENUATUS |

| ORG NUM | PHYLUM | FAMILY | GENUS | SPECIES | FULL TAXONOMIC NAME |
|---|---|---|---|---|---|
| 555 | ARTH | CHIR | CRYP | SP A | ARTHROPODA CHIRONOMIDAE CRYPTOCHIRONOMUS SPECIES A |
| 557 | ARTH | CHIR | CRYP | SP B | ARTHROPODA CHIRONOMIDAE CRYPTOCHIRONOMUS SPECIES B |
| 559 | ARTH | CHIR | DEMI | SP A | ARTHROPODA CHIRONOMIDAE DEMICRYPTOCHIRONOMUS SPECIES A |
| 561 | ARTH | CHIR | EINF | SP A | ARTHROPODA CHIRONOMIDAE EINFELDIA SPECIES A |
| 563 | ARTH | CHIR | ENDO | SP A | ARTHROPODA CHIRONOMIDAE ENDOCHIRONOMUS SPECIES A |
| 565 | ARTH | CHIR | ENDO | SP B | ARTHROPODA CHIRONOMIDAE ENDOCHIRONOMUS SPECIES B |
| 567 | ARTH | CHIR | HARN | CURT | ARTHROPODA CHIRONOMIDAE HARNISCHIA CURTILAMELLATA |
| 569 | ARTH | CHIR | PARA | SP A | ARTHROPODA CHIRONOMIDAE PARACHIRONOMUS SPECIES A |
| 571 | ARTH | CHIR | PARC | SP A | ARTHROPODA CHIRONOMIDAE PARACLADOPELMA SPECIES A |
| 573 | ARTH | CHIR | PARL | SP A | ARTHROPODA CHIRONOMIDAE PARALAUTERBORNIELLA SPECIES A |
| 575 | ARTH | CHIR | PART | SP A | ARTHROPODA CHIRONOMIDAE PARATENDIPES SPECIES A |
| 577 | ARTH | CHIR | PHAE | SP A | ARTHROPODA CHIRONOMIDAE PHAENOPSECTRA SPECIES A |
| 579 | ARTH | CHIR | POLY | SP A | ARTHROPODA CHIRONOMIDAE POLYPEDILUM SPECIES A |
| 581 | ARTH | CHIR | ROBA | CLAV | ARTHROPODA CHIRONOMIDAE ROBACKIA CLAVIGER |
| 583 | ARTH | CHIR | STEC | SP A | ARTHROPODA CHIRONOMIDAE STENOCHIRONOMUS SPECIES A |
| 585 | ARTH | CHIR | STIC | SP A | ARTHROPODA CHIRONOMIDAE STICTOCHIRONOMUS SPECIES A |
| 587 | ARTH | CHIR | MONO | SP A | ARTHROPODA CHIRONOMIDAE MONODIAMESA SPECIES A |
| 589 | ARTH | CHIR | CRIC | BICI | ARTHROPODA CHIRONOMIDAE CRICOTOPUS BICINCTUS |
| 591 | ARTH | CHIR | CRIC | SP A | ARTHROPODA CHIRONOMIDAE CRICOTOPUS SPECIES A |
| 593 | ARTH | CHIR | EPOI | SP A | ARTHROPODA CHIRONOMIDAE EPOICOCLADIUS SPECIES A |
| 595 | ARTH | CHIR | NANO | DIST | ARTHROPODA CHIRONOMIDAE NANOCLADIUS DISTINCTUS |
| 597 | ARTH | CHIR | NANO | SP A | ARTHROPODA CHIRONOMIDAE NANOCLADIUS SPECIES A |
| 599 | ARTH | CHIR | PSEC | SP A | ARTHROPODA CHIRONOMIDAE PSECTROCLADIUS SPECIES A |
| 601 | ARTH | CERA | PALP | SP A | ARTHROPODA CERATOPOGONIDAE PALPOMYIA SPECIES A |
| 603 | ARTH | LIME | LIME | SP A | ARTHROPODA LIMNESIIDAE LIMNESIA SPECIES A |
| 605 | ARTH | PION | FORE | SP A | ARTHROPODA PIONIDAE FORELIA SPECIES A |
| 607 | ARTH | UNIO | UNIO | SP A | ARTHROPODA UNIONICOLIDAE UNIONICOLA SPECIES A |
| 609 | ARTH | UNIO | UNIO | SP B | ARTHROPODA UNIONICOLIDAE UNIONICOLA SPECIES B |
| 651 | MOLL | UNKN | NUDI | SP A | MOLLUSCA UNKNOWN NUDIBRANCH SPECIES A |
| 653 | MOLL | PLAO | GYRA | SP A | MOLLUSCA PLANORBIDAE GYRAULUS SPECIES A |
| 655 | MOLL | PLAO | GYRA | SP B | MOLLUSCA PLANORBIDAE GYRAULUS SPECIES B |
| 657 | MOLL | PHYS | PHYS | GRYI | MOLLUSCA PHYSIDAE PHYSA GYRINA |
| 659 | MOLL | ANCY | FERR | RIVU | MOLLUSCA ANCYLIDAE FERRISSIA RIVULARIS |
| 661 | MOLL | ASSI | ASSI | CALI | MOLLUSCA ASSIMINEIDAE ASSIMINEA CALIFORNICA |
| 663 | MOLL | THIA | MELA | TUBE | MOLLUSCA THIARIDAE MELANOIDES TUBERCULATA |
| 665 | MOLL | PYRA | ODOS | FETE | MOLLUSCA PYRAMIDELLIDAE ODOSTOMIA FETELLA |
| 667 | MOLL | SEME | THEO | LUBR | MOLLUSCA SEMELIDAE THEORA LUBRICA |
| 669 | MOLL | MYTI | MUSC | SENH | MOLLUSCA MYTILIDAE MUSCULISTA SENHOUSIA |
| 671 | MOLL | MYTI | MYTI | EDUL | MOLLUSCA MYTILIDAE MYTILUS EDULIS |
| 673 | MOLL | CORB | CORB | FLUM | MOLLUSCA CORBICULIDAE CORBICULA FLUMINEA |
| 675 | MOLL | SPHE | PISI | CASE | MOLLUSCA SPHAERIIDAE PISIDIUM CASERTANUM |
| 677 | MOLL | SPHE | PISI | COMP | MOLLUSCA SPHAERIIDAE PISIDIUM COMPRESSUM |
| 679 | MOLL | SPHE | SPHE | SP A | MOLLUSCA SPHAERIIDAE SPHAERIUM SPECIES A |
| 681 | MOLL | TELL | MACO | BALT | MOLLUSCA TELLINIDAE MACOMA BALTHICA |
| 683 | MOLL | VENE | PROT | STAM | MOLLUSCA VENERIDAE PROTOTHACA STAMINEA |
| 685 | MOLL | VENE | GEMM | GEMM | MOLLUSCA VENERIDAE GEMMA GEMMA |
| 687 | MOLL | MYID | MYA | AREN | MOLLUSCA MYIDAE MYA ARENARIA |
| 689 | MOLL | CORL | POTA | AMUR | MOLLUSCA CORBULIDAE POTAMOCORBULA AMURENSIS |
| 691 | MOLL | UNIN | ANOD | NUTT | MOLLUSCA UNIONIDAE ANODONTA NUTTALLIANA |
| 700 | CHOR | MOLG | MOLG | MANH | CHORDATA MOLGULIDAE MOLGULA MANHATTENSIS |

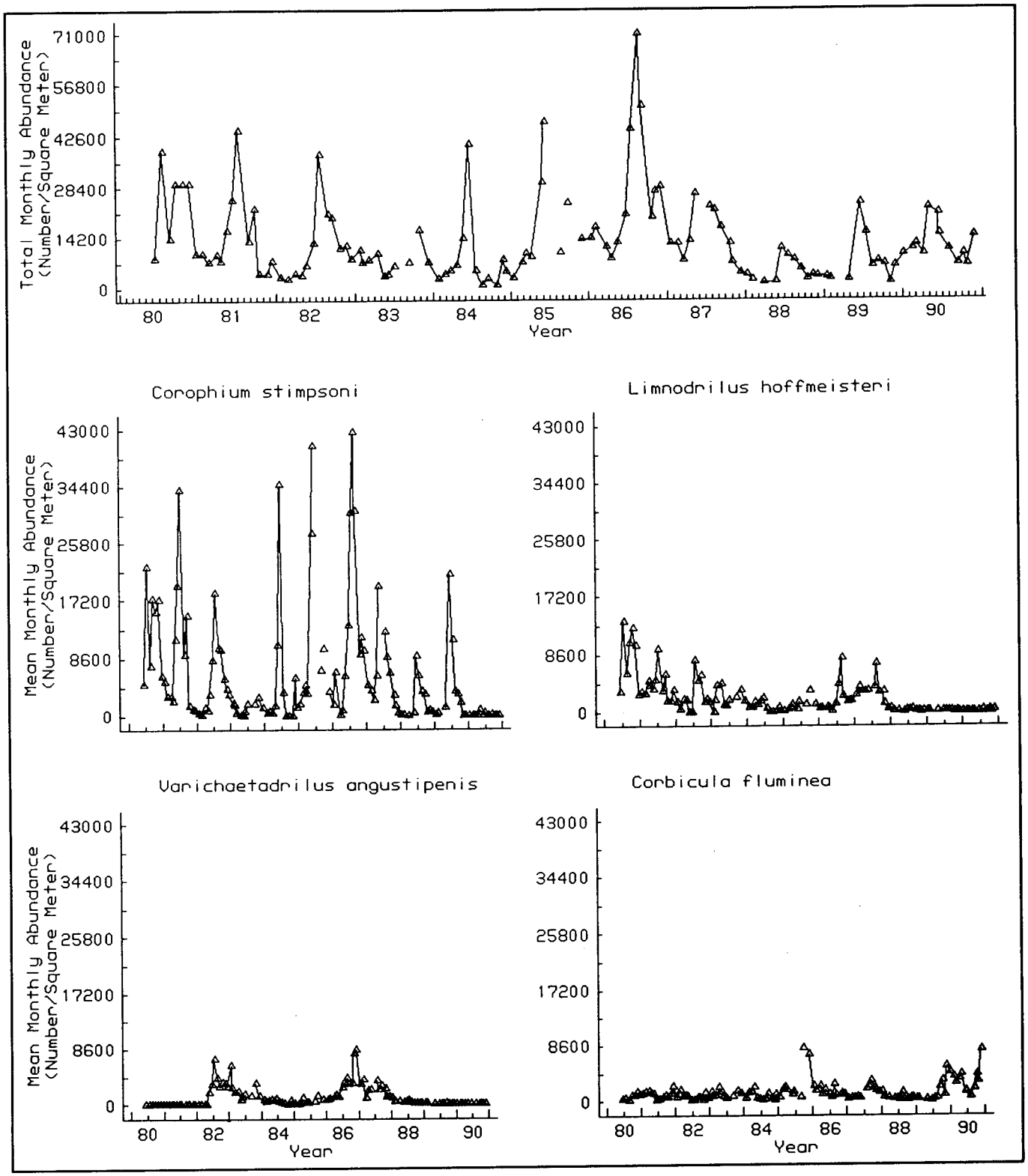
Appendix B

# Graphs of Mean Monthly Abundance of All Species (Total) and the Four Numerically Dominant Species at Each Benthic Site

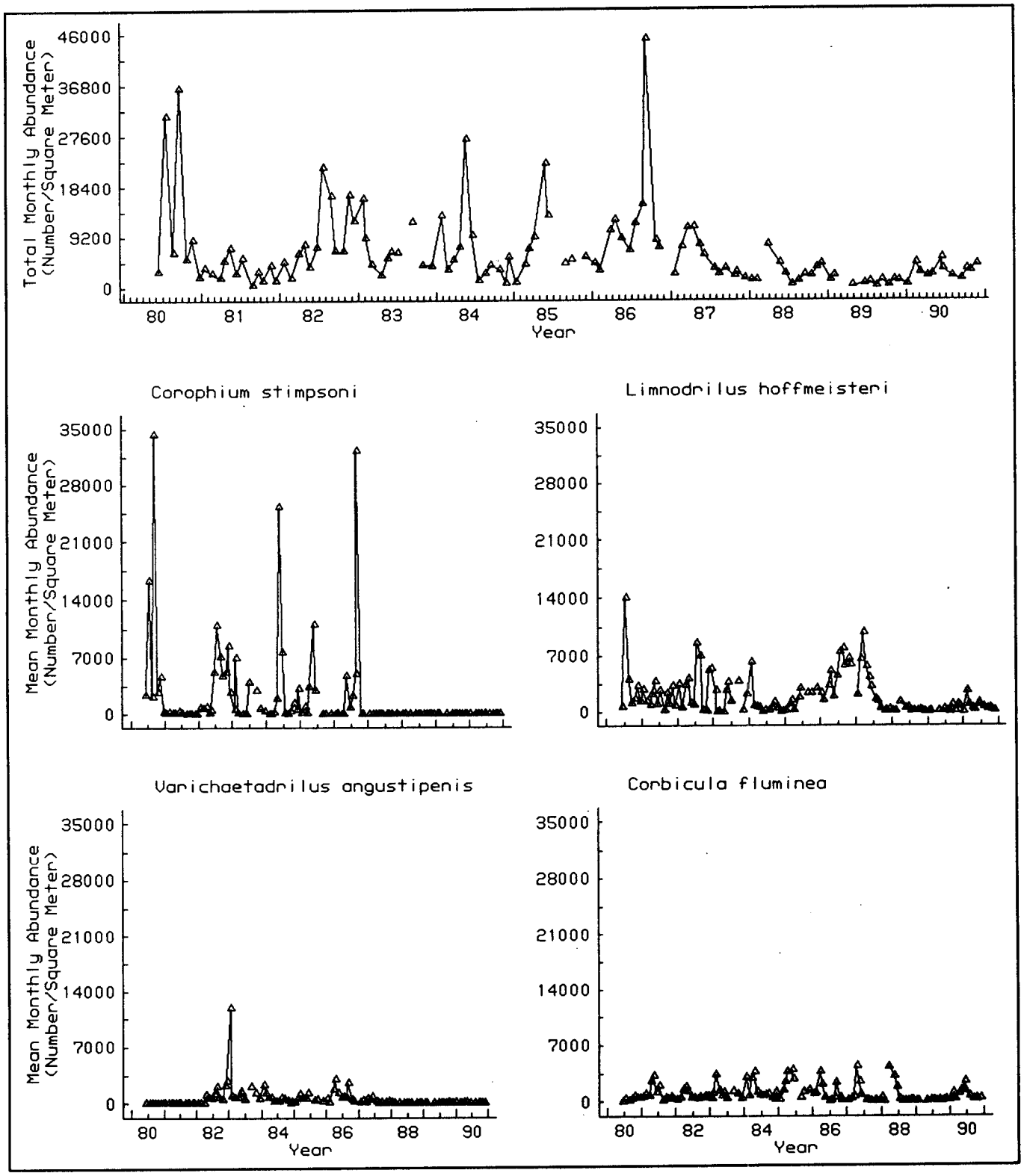
# MEAN TOTAL ABUNDANCE AND MEAN MONTHLY ABUNDANCE OF THE FOUR NUMERICALLY DOMINANT ORGANISMS AT SITE D7-C



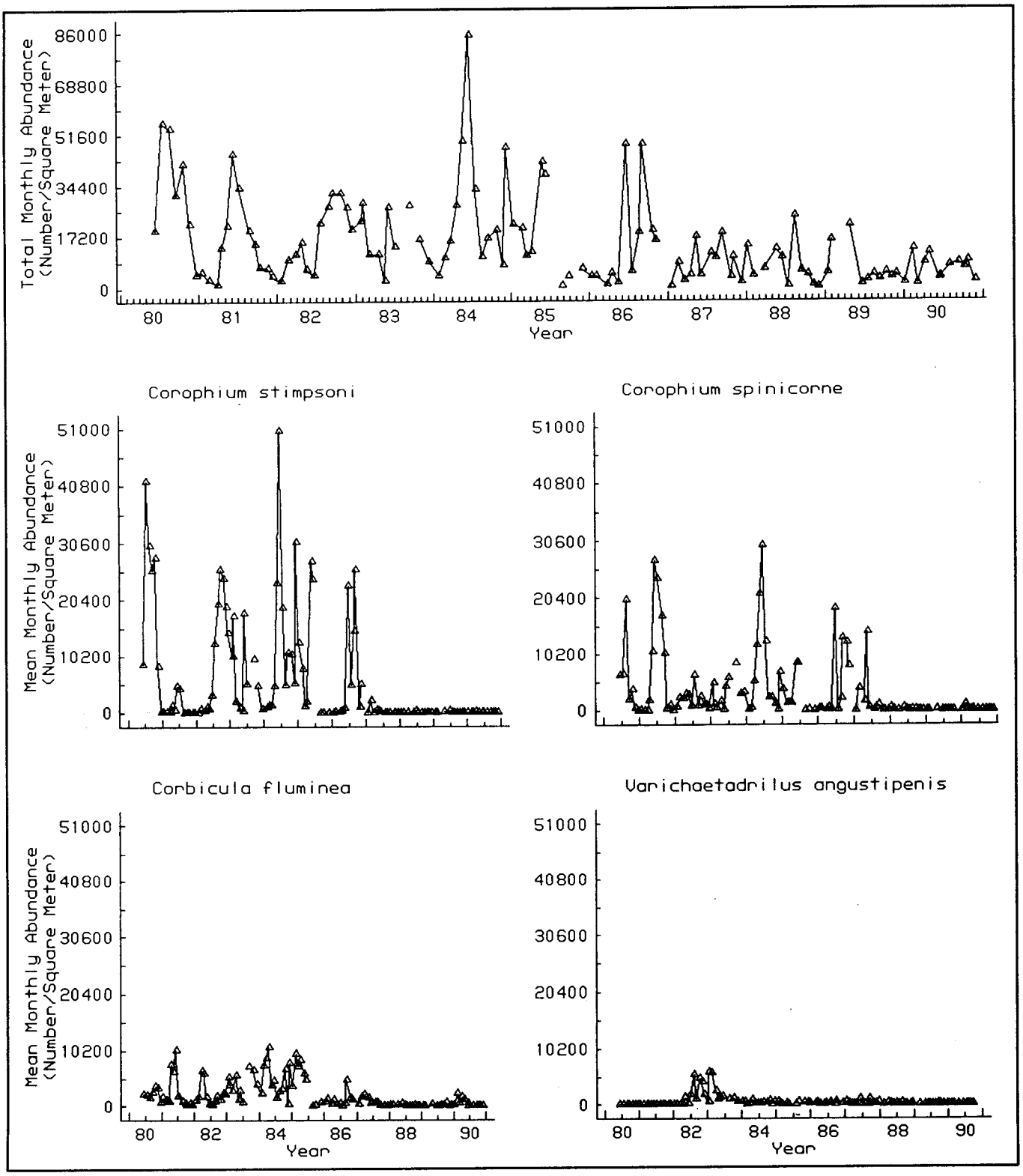
## MEAN TOTAL ABUNDANCE AND MEAN MONTHLY ABUNDANCE OF THE FOUR NUMERICALLY DOMINANT ORGANISMS AT SITE D11-C



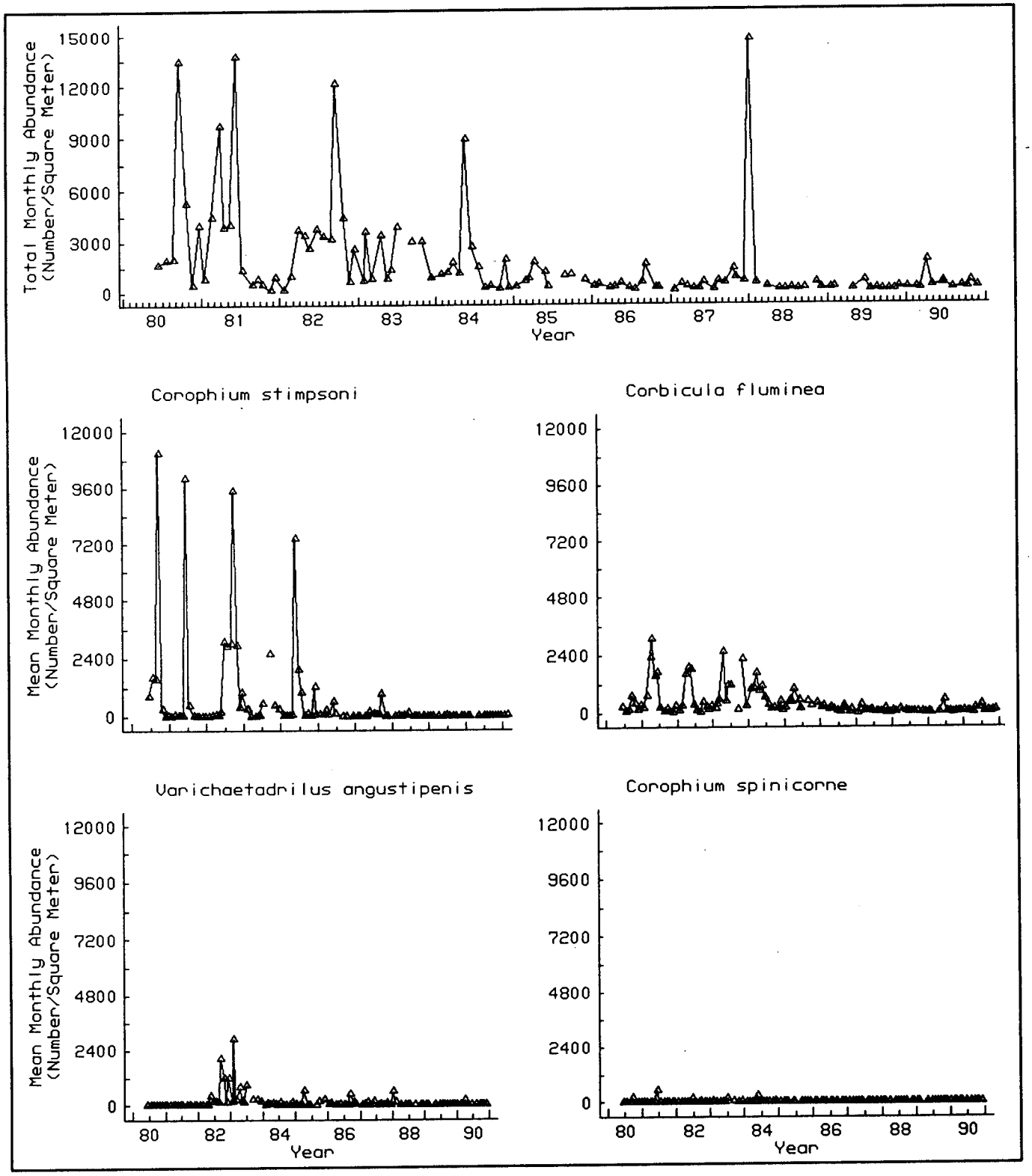
## MEAN TOTAL ABUNDANCE AND MEAN MONTHLY ABUNDANCE OF THE FOUR NUMERICALLY DOMINANT ORGANISMS AT SITE D4-R



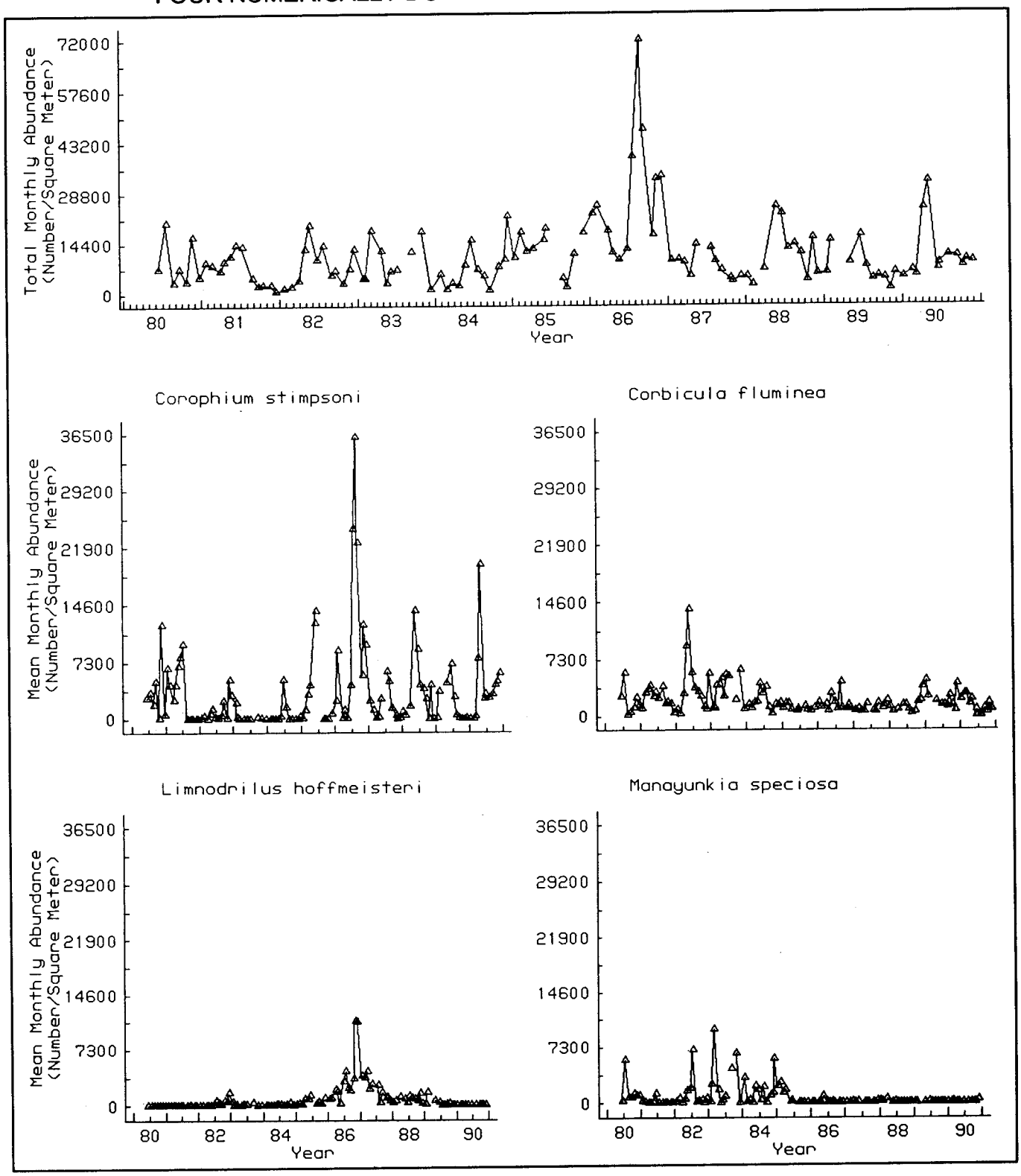
## MEAN TOTAL ABUNDANCE AND MEAN MONTHLY ABUNDANCE OF THE FOUR NUMERICALLY DOMINANT ORGANISMS AT SITE D4-L



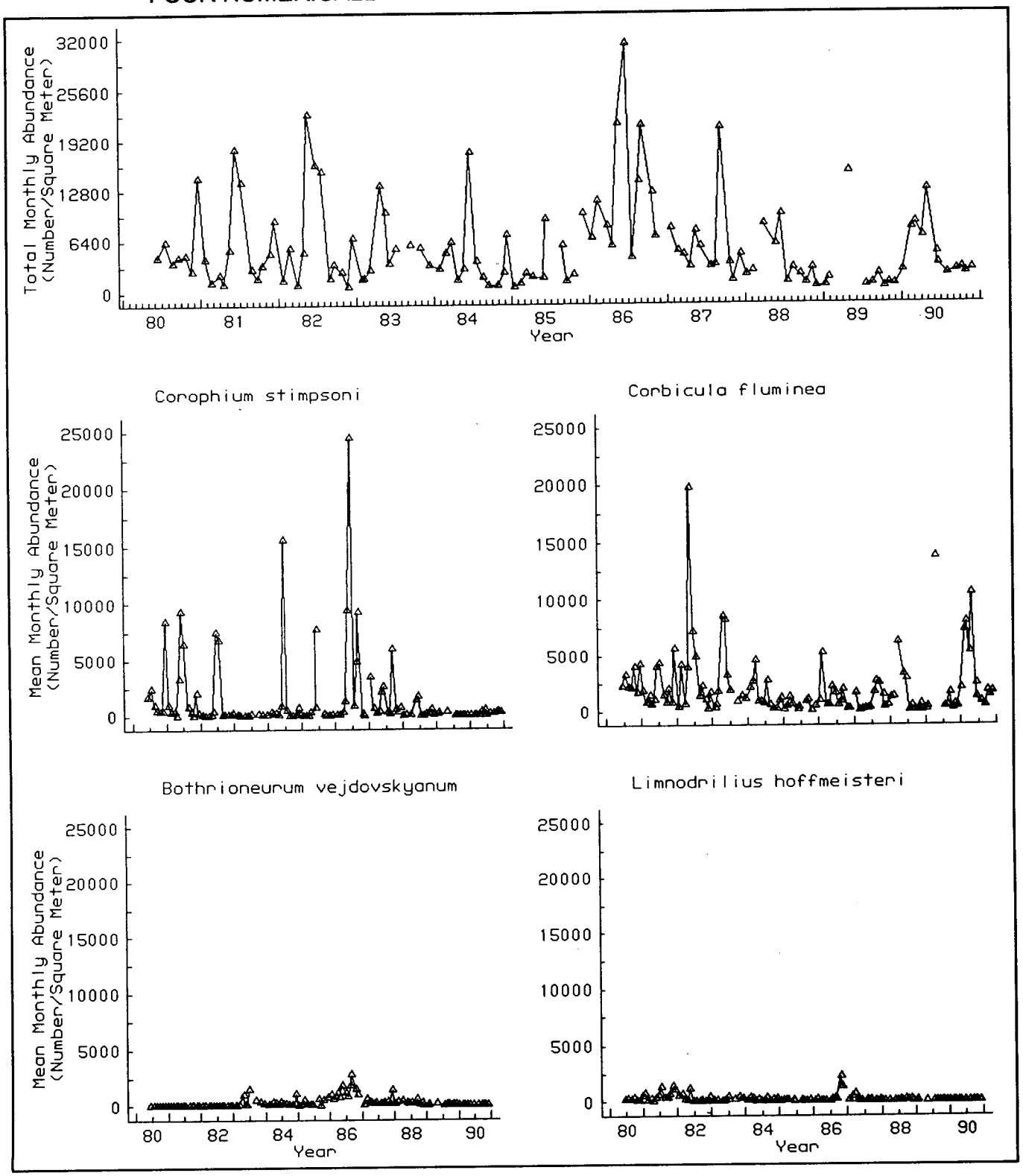
## MEAN TOTAL ABUNDANCE AND MEAN MONTHLY ABUNDANCE OF THE FOUR NUMERICALLY DOMINANT ORGANISMS AT SITE D4-C



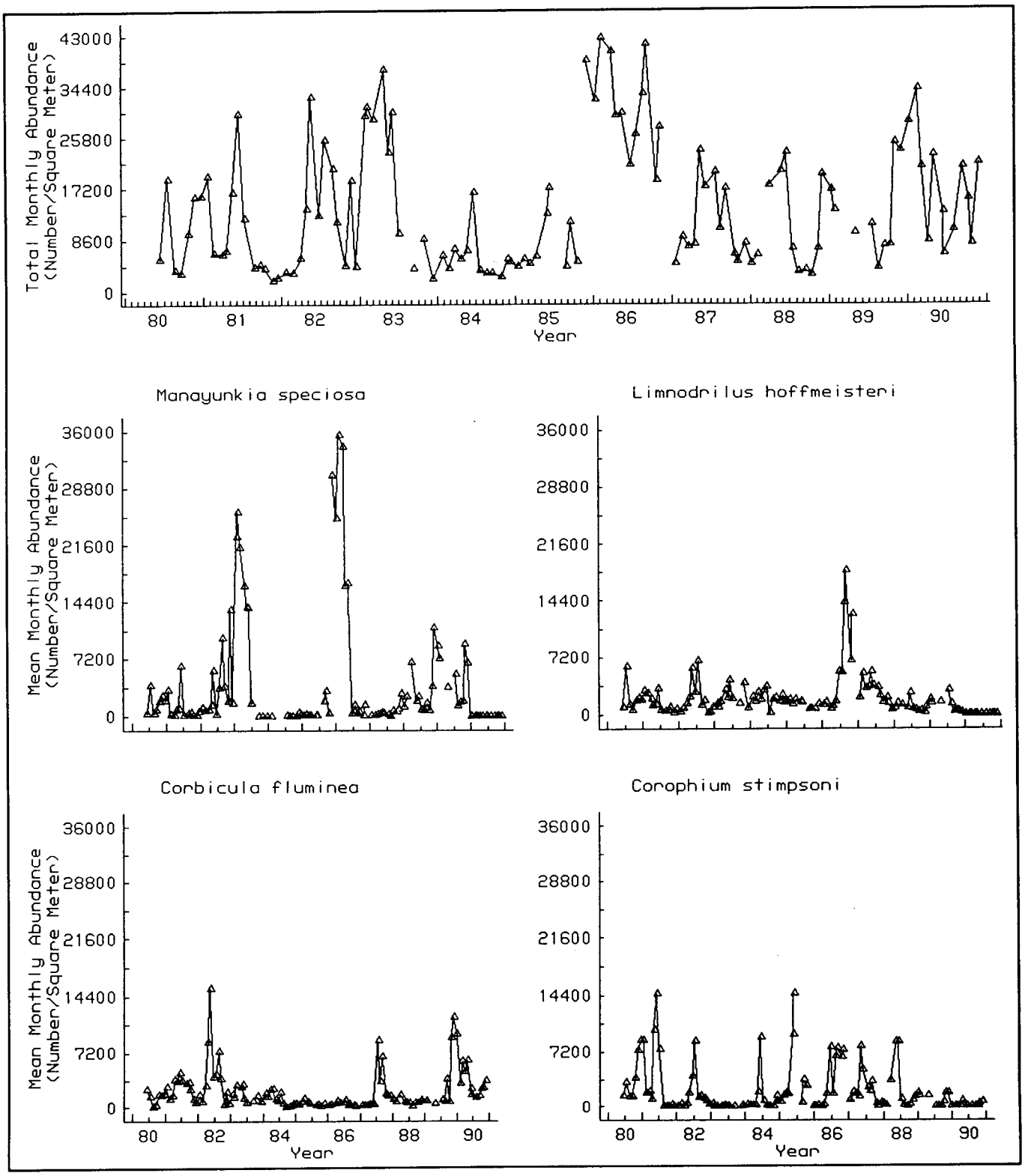
## MEAN TOTAL ABUNDANCE AND MEAN MONTHLY ABUNDANCE OF THE FOUR NUMERICALLY DOMINANT ORGANISMS AT SITE D19-C



## MEAN TOTAL ABUNDANCE AND MEAN MONTHLY ABUNDANCE OF THE FOUR NUMERICALLY DOMINANT ORGANISMS AT SITE D28A-L



## MEAN TOTAL ABUNDANCE AND MEAN MONTHLY ABUNDANCE OF THE FOUR NUMERICALLY DOMINANT ORGANISMS AT SITE D28A-R



# COMMON ABBREVIATIONS AND METRIC CONVERSIONS

## Area

| | |
|---|---|
| $km^2$ | square kilometers; to convert to square miles, multiply by 0.3861 |
| $m^2$ | square meters; to convert to square feet, multiply by 10.764 |

## Length

| | |
|---|---|
| cm | centimeters; to convert to inches, multiply by 0.3937 |
| FL | fork length; length from the most anterior part of a fish to the median caudal fin rays (fork in the tail) |
| km | kilometers; to convert to miles, multiply by 0.62139 |
| m | meters; to convert to feet, multiply by 3.2808 |
| mm | millimeters; to convert to inches, multiply by 0.03937 |
| SL | standard length; tip of upper jaw of a fish to crease formed when tail is bent sharply upward |
| TL | total length; length from the most anterior part of a fish to the end of the tail |

## Volume

| | |
|---|---|
| AF | acre-foot; equal to 43,560 cubic feet |
| L | liters; to convert to quarts, multiply by 1.05668; to convert to gallons, multiply by 0.26417 |
| mL | milliliters |

## Flow

| | |
|---|---|
| cfs | cubic feet per second; to convert to acre-feet per day, multiply by 1.98 |
| gpm | gallons per minute |
| mgd | million gallons per day |

## Velocity

| | |
|---|---|
| fps | feet per second |
| m/s | meters per second; to convert to feet per second, multiply by 3.2808 |

## Mass

| | |
|---|---|
| kg | kilograms; to convert to pounds, multiply by 2.2046 |

## Concentration

| | |
|---|---|
| mg/L | milligrams per liter; equals parts per million (ppm) |
| µg/L | micrograms per liter; equals parts per billion (ppb) |

## Specific Conductance

| | |
|---|---|
| µS | microsiemens; equivalent to micromhos |
| µS/cm | microsiemens per centimeter |

## Temperature

| | |
|---|---|
| °C | degrees Celsius; to convert to °F, multiply by 1.8 then add 32 degrees |
| °F | degrees Fahrenheit; to convert to °C, subtract 32 degrees then divide by 1.8 |

## Mathematics and Statistics

| | |
|---|---|
| df | degrees of freedom |
| *e* | base of natural logarithm |
| E | expected value |
| log | logarithm |
| *N* | sample size |
| NS | not significant |
| % | percent |
| ‰ | per thousand |
| P | probability |
| *r* | correlation or regression coefficient (simple) |
| *R* | correlation or regression coefficient (multiple) |
| SD | standard deviation |
| SE | standard error |
| *V* | variance |

## Interagency Program Members

| | |
|---|---|
| COE | U.S. Army Corps of Engineers |
| DFG | California Department of Fish and Game |
| DWR | California Department of Water Resources |
| EPA | U.S. Environmental Protection Agency |
| FWS | U.S. Fish and Wildlife Service |
| SWRCB | California State Water Resources Control Board |
| USBR | U.S. Bureau of Reclamation |
| USGS | U.S. Geological Survey |

## General

| | |
|---|---|
| CPUE | catch per unit effort |
| YOY | young of the year |

# SCIENTIFIC NAMES OF FISH

| | |
|---|---|
| American eel | *Anguilla rostrata* |
| American shad | *Alosa sapidissima* |
| bay goby | *Lepidogobius lepidus* |
| bigscale logperch | *Percina macrolepida* |
| black bullhead | *Ameiurus melas* |
| black crappie | *Pomoxis nigromaculatus* |
| blue catfish | *Ictalurus furcatus* |
| bluegill | *Lepomis macrochirus* |
| brown bullhead | *Ameiurus nebulosus* |
| brown trout | *Salmo trutta* |
| California halibut | *Paralichthys californicus* |
| California roach | *Hesperoleucus symmertricus* |
| chameleon goby | *Tridentiger trigonocephalus* |
| channel catfish | *Ictalurus punctatus* |
| Chinook salmon | *Oncorhynchus tshawytscha* |
| common carp | *Cyprinus carpio* |
| delta smelt | *Hypomesus transpacificus* |
| English sole | *Pleuronectes vetulus* |
| fathead minnow | *Pimephales promelas* |
| golden shiner | *Notemigonus crysoleucas* |
| goldfish | *Carassius auratus* |
| green sturgeon | *Acipenser medirostris* |
| green sunfish | *Lepomis cyanellus* |
| hardhead | *Mylopharodon conocephalus* |
| hitch | *Lavinia exilicauda* |
| inland silverside | *Menidia beryllina* |
| jacksmelt | *Atherinopsis californiensis* |
| largemouth bass | *Micropterus salmoides* |
| longfin smelt | *Spirinchus thaleichthys* |
| mosquitofish | *Gambusia affinis* |
| northern anchovy | *Engraulis mordax* |
| Pacific herring | *Clupea pallasii* |
| Pacific lamprey | *Lampetra tridentata* |
| pink salmon | *Oncorhynchus gorbuscha* |
| plainfin midshipman | *Porichthys notatus* |
| prickly sculpin | *Cottus asper* |
| pumpkin seed | *Lepomis gibbosus* |
| rainwater killifish | *Lucania parva* |
| redear sunfish | *Lepomis microlophus* |
| red shiner | *Cyprinella lutrensis* |
| riffle sculpin | *Cottus gulosus* |
| river lamprey | *Lampetra ayresii* |
| Sacramento blackfish | *Orthodon microlepidotus* |
| Sacramento perch | *Archoplites interruptus* |
| Sacramento splittail | *Pogonichthys macrolepidotus* |
| Sacramento squawfish | *Ptychocheilus grandis* |
| Sacramento sucker | *Catostomus occidentalis* |
| shiner surfperch | *Cymatogaster aggregata* |
| silver salmon | *Oncorhynchus kisutch* |
| smallmouth bass | *Micropterus dolomieu* |
| speckled dace | *Rhinichthys osculus* |
| speckled sanddab | *Citharichthys stigmaeus* |
| splittail | *Pogonichthys macrolepidotus* |
| staghorn sculpin | *Leptocottus armatus* |
| starry flounder | *Platichthys stellatus* |
| steelhead trout | *Oncorhynchus mykiss* |
| striped bass | *Morone saxatilis* |
| striped mullet | *Mugil cephalus* |
| surf smelt | *Hypomesus pretiosus* |
| threadfin shad | *Dorosoma petenense* |
| threespine stickleback | *Gasterosteus aculaetus* |
| tui chub | *Gila bicolor* |
| tule perch | *Hysterocarpus traski* |
| wakasagi | *Hypomesus nipponensis* |
| warmouth | *Lepomis gulosus* |
| white catfish | *Ameiurus catus* |
| white crappie | *Pomoxis annularis* |
| white croaker | *Genyonemus lineatus* |
| white sturgeon | *Acipenser transmontanus* |
| yellow bullhead | *Ameiurus natalis* |
| yellow perch | *Perca flavescens* |
| yellowfin goby | *Acanthogobius flavimanus* |