APPENDIX A: ELEMENTAL CARBON, NITROGEN, AND PHOSPHORUS COMPOSITION OF ZOOPLANKTON AND BENTHOS

1. Elemental carbon, nitrogen, and phosphorus composition (expressed as a percentage of the organism's dry weight) of various taxa of zooplankton and benthos is presented herein. The appendix abbreviations are defined as follows:

AFDW = ash-free dry weight

N = nitrogen

$\bar{X}$ = mean

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCE
PHYLUM: MOLLUSCA						
Mollusca	Marine	Range and $\bar{X}$ of 12 spp.		7.3-12.5; 9.9		Twelve references cited by Vinogradov (1953)
Mollusca	Marine	Range and $\bar{X}$ of 6 spp.			0.6-1.1; 0.8	Six references cited by Vinogradov (1953)
Mytilus sp.	Marine	January		5.7		Delff (1912) cited by Vinogradov (1953)
		April		10.1		
		July		8.2		
		October		9.3		
		December		8.2		
Crassostrea virginica	Marine			7.2		Tully (1936) cited by Vinogradov (1953)
Crassostrea gigas	Marine			7.9		
Ostrea lurida	Marine			7.9		
Physa fontinalis	Freshwater	$\bar{X}$ of specimens including shells	32.2			Salonen and Sarvala (1978)
Radix peregra	Freshwater		30.5			
Pisidium amnicum	Freshwater		22.5			
Lymnea stagnalis	Freshwater		25.6			
Anodonta piscinalis	Freshwater		27.5			
Sphaerium corneum	Freshwater		23.7			
Dreissena polymorpha	Freshwater	July (Early)	37.9	11.6		Stanczykowska and Lawacz (1976)
		July (Middle)	45.1	11.7		
		July (Late)	42.6	11.9		
		August	44.0	11.8		
		September	42.2	11.3		
PHYLUM: ANNELIDA Class: Polychaeta						
Polychaeta	Marine	Yearly range and $\bar{X}$	15.9-43.9; 29.9	4.4-11.2; 8.9	0.4-1.8; 1.0	Beers (1966)

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCE
Centroptilium luteolum	Freshwater	N values converted from % AFDW (Table 1)	49.7	9.1		Salonen et al. (1976)
Heptagenia fuscogrisea	Freshwater		52.2	8.3		
Order: Odonata						
Cordulia aenea	Freshwater	N values converted from % AFDW (Table 1)	47.4	8.6		Salonen et al. (1976)
Order: Megaloptera						
Sialis sp.	Freshwater	N values converted from % AFDW (Table 1)	49.2	8.9		Salonen et al. (1976)
Order: Trichoptera						
Limnephilidae	Freshwater	N values converted from % AFDW (Table 1)	46.4	5.6		Salonen et al. (1976)
Agrypnia obsoleta	Freshwater		47.3	7.6		
Stenopsychae griseipennis	Freshwater		51.1	10.0	1.3	
Class: Crustacea						
Crustacea	Freshwater	Range and $\bar{X}$		3.6-12.7; 8.6		Seven references cited by Vinogradov (1953)
Crustacea	Marine	Hourly range and $\bar{X}$	32.9-41.7; 36.9	7.0-8.9; 7.8		Beers (1966)
Subclass: Malacostraca Order: Mysidacea						
Euphausids - mysids	Marine	Yearly range and $\bar{X}$	35.4-43.4; 40.7	9.4-10.5; 10-0	1.4-1.6; 1.5	Beers (1966)
Siriella aequiremis	Marine		42.4	11.0		Omori (1969)
Mysis flexuosa	Marine			11.9		Delff (1912) cited by Vinogradov (1953)
Mysis relicta	Marine	N values converted from % AFDW (Table 1)	50.0	9.1		Salonen et al. (1976)
Neomysis rayii	Marine			8.7-11.4		Jawed (1969)

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCE
Polychaeta	Marine	Range and $\bar{X}$ of 20 spp.		7.5-13.4; 11.1		Brand (1927) cited by Vinogradov (1953)
Nereis japonicus	Marine				0.4	Yamamura (1934) cited by Vinogradov (1953)
Nereis diversicolor	Marine			10.1		Delff (1912) cited by Vinogradov (1953)
Arenicola marina	Marine			9.7		
Arenicola marina	Marine			5.2		Weigelt (1891) cited by Vinogradov (1953)
Class: Hirudinea						
Erpobdella octoculata	Freshwater	N values converted from % AFDW (Table 1)	48.3	9.0		Salonen et al. (1976)
Class: Oligochaeta						
Limnodrilus sp.	Freshwater				0.4	Yamamura (1934) cited by Vinogradov (1953)
PHYLUM: ARTHROPODA						
Class: Insecta						
Order: Diptera						
Chironomus plumosus	Freshwater	N values converted from % AFDW (Table 1)	45.1	8.3		Salonen et al. (1976)
Chaoborus flavicans	Freshwater		47.3	8.8		
Order: Hemiptera						
Halobates sericeus	Marine		52.6			Omori (1969)
Notonecta glauca	Freshwater	N values converted from % AFDW (Table 1)	50.0	9.9		Salonen et al. (1976)
Order: Ephemeroptera						
Leptophlebia vespertina	Freshwater	N values converted from % AFDW (Table 1)	49.3	9.5		Salonen et al. (1976)

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCE
Centroptilium luteolum	Freshwater	N values converted from % AFDW (Table 1)	49.7	9.1		Salonen et al. (1976)
Heptagenia fuscogrisea	Freshwater		52.2	8.3		
Order: Odonata						
Cordulia aenea	Freshwater	N values converted from % AFDW (Table 1)	47.4	8.6		Salonen et al. (1976)
Order: Megaloptera						
Sialis sp.	Freshwater	N values converted from % AFDW (Table 1)	49.2	8.9		Salonen et al. (1976)
Order: Trichoptera						
Limnephilidae	Freshwater	N values converted from % AFDW (Table 1)	46.4	5.6		Salonen et al. (1976)
Agrypnia obsoleta	Freshwater		47.3	7.6		
Stenopsyche griseipennis	Freshwater		51.1	10.0	1.3	
Class: Crustacea						
Crustacea	Freshwater	Range and $\bar{X}$		3.6-12.7; 8.6		Seven references cited by Vinogradov (1953)
Crustacea	Marine	Nearly range and $\bar{X}$	32.9-41.7; 36.9	7.0-8.9; 7.8		Beers (1966)
Subclass: Malacostraca Order: Mysidacea						
Euphausids - mysids	Marine	Yearly range and $\bar{X}$	35.4-43.4; 40.7	9.4-10.5; 10-0	1.4-1.6; 1.5	Beers (1966)
Siriella sequiremis	Marine		42.4	11.0		Omori (1969)
Mysis flexuosa	Marine			11.9		Delff (1912) cited by Vinogradov (1953)
Mysis relicta	Marine	N values converted from % AFDW (Table 1)	50.0	9.1		Salonen et al. (1976)
Neomysis rayii	Marine			8.7-11.4		Javed (1969)

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCES
Order: Isopoda						
Asellus aquaticus	Freshwater	N values converted from % AFDW (Table 1)	34.3	6.9		Salonen et al. (1976)
Asellus aquaticus	Freshwater		30.4	7.9		Meyer (1914) cited by Vinogradov (1953)
Order: Amphipoda						
Parathemisto japonica	Marine		48.4	8.2		Omori (1969)
Platycelus serratulus	Marine		25.9	4.4		
Cyphocaris challengeri	Marine		45.9	6.1		
Gammarus locusta	Freshwater	Table 234	38.1	7.8		Vinogradov (1953)
Gammarus locusta				9.7		Delff (1912) cited by Vinogradov (1953)
Gammarus pulex locusta	Freshwater			9.2		Geng (1925) cited by Vinogradov (1953)
Gammarus pulex	Freshwater		40.3	8.1		Meyer (1914) cited by Vinogradov (1953)
Pallasea quadrispinosa	Freshwater	N values converted from % AFDW (Table 1)	35.4	6.6		Salonen et al. (1976)
Gammracanthus lacustris	Freshwater		41.7	7.6		
Gammaracanthus lacustris	Freshwater		44.9-49.5			Salonen and Sarvala (1978)
Order: Euphausiacea						
Euphausia krohnii	Marine		35.8			Curl (1962)
Euphausia pacifica	Marine	Calculated from author's regression equation of total N on dry weight		11.6-11.7		Javed (1969)
Euphausia pacifica	Marine		38.7	10.7		Omori (1969)
Euphausia pacifica	Marine		39.6	10.1		
Tessarabrachion occulatus	Marine		47.2	10.0		

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCE
Order: Decapoda						
Lucifer reynaudii	Marine		41.1	9.3		Omori (1969)
Subclass: Brachiopoda Order: Cladocera						
Daphnia hyalina	Freshwater	Eggs	53.6	9.3	1.2	Beudoin and Ravera (1972)
		New born	42.8	9.7	1.6	
		Young 1	42.7	9.8	1.5	
		Young 2	43.5	10.7	1.3	
		Adult 1	44.2	9.6	1.2	
		Adult 2	44.5	9.6	1.1	
		Adult 3	42.8	9.1	1.0	
		Adult 4	42.0	8.8	1.2	
Daphnia pulex	Freshwater			10.3		Geng (1925) cited by Vinogradov (1953)
Daphnia pulex	Freshwater		37.9	8.0		Meyer (1914) cited by Vinogradov (1953)
Daphnia pulex	Freshwater			7.5		Birge and Juday (1922) cited by Vinogradov (1953)
Daphnia pulex	Freshwater		43.1	10.1		Vinogradov (1933) cited by Vinogradov (1953)
Daphnia pulex	Freshwater				1.3	Cowgill and Burns (1975)
Daphnia pulex	Freshwater			8.0		Knauthe (1907) cited by Vinogradov (1953)
Daphnia pulex	Freshwater				1.3-1.9	Rigler (1961b)
Daphnia magna	Freshwater				1.6	Cowgill and Burns (1975)

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCES
Daphnia magna	Freshwater	Calculated from Table 5			0.2	Rigler (1961b)
Daphnia magna	Freshwater	Juveniles Adults	48.0 47.7			Bogatova et al. (1971)
Daphnia cristata	Freshwater	N values converted from % AFDW (Table 1)	50.7	6.8		Salonen et al. (1976)
Moina rectirostris	Freshwater				1.3-1.9	Gutel'mackher (1977)
Moina macrocopa	Freshwater	Calculated assuming 1 mg organic carbon = 10.98 calories	49.4			Bogatova et al. (1971)
Ceriodaphnia reticulata	Freshwater		48.8			
Bolopedium gibberum	Freshwater			8.4		Birge and Juday (1922) cited by Vinogradov (1953)
Leptodora kindti	Freshwater			8.9		
Bosmina sp.	Freshwater			10.3		Knauthe (1907) cited by Vinogradov (1953)
Subclass: Copepoda						
Copepoda	Marine			9.2		Brandt cited by Vinogradov (1953)
Copepoda	Marine			9.2		Krey (1958)
Copepoda	Marine		35.6			Curl (1962)
Copepoda	Marine	January	43.2	10.1	0.9	Beers (1966)
		February	43.5	10.6	0.9	
		March	42.9	10.0	0.8	
		April	47.6	10.1	0.8	
		May	44.2	8.8	0.9	
		June	41.6	9.5	0.8	
		July	39.8	8.3	0.7	
		August	35.8	8.7	0.7	
		September	35.2	8.8	0.7	
		October	39.2	9.0	0.8	
		November	42.5	11.1	0.8	
		December	44.1	11.2	0.9	

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCES
Copepoda	Marine	Coastal Copepoda	47.0	12.6		Itoh (1973)
		Oceanic males and stage IV females	57.0	10.9		
		Oceanic females	57.0	7.5		
Calanus finmarchicus	Marine	Table 236	45.9	10.2		Vinogradov (1933) cited by Vinogradov (1953)
Calanus finmarchicus	Marine		47.7	10.1		Brandt and Raben (1919-1922) cited by Vinogradov (1953)
Calanus finmarchicus	Marine		39.8-41.7			Curl (1962)
Calanus finmarchicus	Marine			Female Male Juv. V	Female Male Juv. V	Butler et al. (1970)
		January		11.2 9.7 8.8	0.8 0.9 0.7	
		February		12.4 11.1		
		March		13.9	1.1	
		April		11.0 8.6	1.2 0.8	
		May		11.1	1.3	
		June		9.3 7.6	1.3 1.0 0.5	
		July		12.9 10.6	0.9 0.7 1.1	
		August		10.9 9.5	1.2 0.7	
		September		9.0	0.7 0.8 0.6	
		December		11.9	0.9 0.6	
		Seasonal $\bar{X}$		11.4 9.5	1.0 0.8 0.8	
Calanus finmarchicus	Marine		67.5	9.3	0.7	Reeve et al. (1970)
Calanus finmarchicus	Marine		67.2-67.5	8.4-10		Mayzaud (1976)
Calanus cristatus	Marine		60.9	6.3		Omori (1969)
Calanus cristatus	Marine		39.0	7.6		
Calanus cristatus	Marine		59.0	5.9		

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCES
Calanus cristatus	Marine	Female geographical variations (north to south)	60.9, 60.0, 61.8, 62.6, 62.7	7.5, 8.2, 6.8, 7.4, 8.6		Omori (1970)
		Male geographical variations (north to south)	55.9, 56.0, 56.1, 52.4, 54.1	10.5, 10.8, 11.2, 11.5, 11.9		
		Copepodite V geographical variations (north to south)	58.9, 58.3, 56.8 53.9, 50.3	8.3, 9.5, 10.3, 10.7, 10.6		
		Preservation methods:				
		Freezing	59.9	6.7		
		Drying	57.3	7.1		
		Formalin	55.5	7.5		
Calanus sinicus	Marine	Rinse Type / Volume				Omori (1978)
		Salt water 0.3 ml/mg	59.4	7.0		
		Distilled water 0.3 ml/mg	60.8	7.2		
		Ammonium formate 0.3 ml/mg	59.5	7.1		
		Salt water 3.3 ml/mg	56.5	5.5		
		Distilled water 3.3 ml/mg	58.2	6.1		
		Ammonium formate 3.3 ml/mg	56.7	6.0		
		Calculated from Table 1				
Calanus plumchrus	Marine		61.8	7.0		Omori (1969)
Calanus pacificus	Marine		46.1	11.2		
Calanus pacificus	Marine		58.4	7.8		
Calanus lighti	Marine		48.0	12.7		
Eucalanus bungii bungii	Marine		49.9	7.6		
Rhincalanus nasutus	Marine		52.2	9.9		
Limnocalanus sp.	Freshwater			7.2		Birge and Juday (1922) cited by Vinogradov (1953)
Limnocalanus macrurus	Freshwater	N values converted from % AFDW (Table 1)	62.1	6.0		Salonen et al. (1976)
Parcuchaeta norvegica	Marine	Eggs	63.6	5.8		Nemoto et al. (1976)
		Prespawning females	53.0	10.3		
		Spent females	50.6	10.0		

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCES
Pareuchaeta birostrata	Marine		58.4	7.0		Omori (1969)
Pareuchaeta gersi	Marine		66.6	5.1		
Pleuromamma xiphias	Marine		47.5	13.1		
Pleuromamma xiphias	Marine	Rinse Type / Volume				Omori (1978)
		Salt water 0.24 ml/mg	39.9	12.6		
		Distilled water 0.24 ml/mg	40.6	12.7		
		Ammonium formate 0.24 ml/mg	41.7	12.9		
		Calculated from Table 1				
Centropages sp.	Marine		38.5-38.7			Curl (1962)
Centropages hamatus	Marine		36.3			
Centropages typicus	Marine	$\bar{X}$ of 5 ages; Spring	37.2	9.1		Razoula (1977)
		Summer	42.3	9.3		
Centropages typicus	Marine	Male	28.0	7.1		Boucher et al. (1976)
		Female	26.3	6.3		
Lophogaster sp.	Marine		46.8			Curl (1962)
Temora stylifera	Marine	Fall	50.3			Razoula (1977)
		Winter	31.4			
		Copepodids II	42.3			
		III	39.3			
		IV	35.1			
		V	40.7			
Temora stylifera	Marine	Male	28.7	6.4		Boucher et al. (1976)
		Female	28.2	6.1		
Meganyctiphanes norvegicus	Marine		42.0			Curl (1962)
Metridea okhotensis	Marine		63.5	5.8		Omori (1969)
Disseta palumboi	Marine		51.0	10.7		
Candacia aetiopica	Marine		46.6	12.6		

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCE
Candacia columbiae	Marine		46.6	11.2		Omori (1969)
Pontellina plumata	Marine		44.3	12.2		
Labidocera actifrons	Marine		45.8	12.9		
Labidocera acuta	Marine				0.1	Krishnamurthy (1962)
Sapphirina nigromaculata	Marine				0.1	
Anomalocera patersoni	Marine			11.6		Delff (1912) cited by Vinogradov (1953)
Anomalocera patersoni	Marine		43.0	10.6		Brandt and Raben (1919-1922) cited by Vinogradov (1953)
Calamoecia lucasi	Freshwater	Seasonal range and $\bar{X}$ N value = protein/7.3	30.5-56.4; 43.6	6.5		Green (1976)
Eudiaptomus gracilis	Freshwater	N value calculated from % AFDW (Table 1)	49.8	9.6		Salonen et al. (1976)
Eudiaptomus gracilis	Freshwater				2.3	Cowgill and Burns (1975)
Diaptomus sp.	Freshwater			10.4		Birge and Juday (1922) cited by Vinogradov (1953)
Cyclops sp.	Freshwater			9.6		
Macrocyclops albidus	Freshwater	N value calculated from % AFDW (Table 1)	48.2	9.7		Salonen et al. (1976)
PHYLUM: ROTATORIA						
Branchionus calyciflorus	Freshwater	Calculated assuming 1 mg organic carbon = 10.98 calories	52.5			Bogatova et al. (1971)
PHYLUM: CHAETOGNATHA						
Chaetognaths	Marine	Yearly range and $\bar{X}$	21.0-34.3; 28.3	6.3-9.4; 7.8	0.5-0.7; 0.6	Beers (1966)

APPENDIX A (Continued)

TAXON	MARINE OR FRESHWATER	COMMENTS	CARBON	NITROGEN	PHOSPHORUS	REFERENCES
Sagitta elegans			38.2	10.9		Mayzaud (1976)
			40.7	12.8		
			42.7	14.0		
Sagitta elegans	Marine		39.0	15.1	0.8	Reeve et al. (1970)
Sagitta hispida	Marine	April		11.7		
		May		13.8-15.3		
		June		14.0		
		September		15.0-15.5		
		October		13.5		
		X		14.1		
Sagitta nagae	Marine	Rinse Type / Volume				Omori (1978)
		Salt water 0.14 ml/mg	39.9	12.2		
		Distilled water 0.14 ml/mg	41.0	12.6		
		Ammonium formate 0.14 ml/mg	41.3	13.0		
		Salt water 1.35 ml/mg	43.4	11.4		
		Distilled water 1.35 ml/mg	46.5	11.6		
		Ammonium formate 1.35 ml/mg	43.8	11.5		
		Data calculated from Table 1				
Zooplankton	Marine	Many medusae and ctenophora present Range and X	6-30; 14.3			Platt et al. (1969)
Zooplankton	Marine	Few medusae and other watery forms present	33.7			
Zooplankton	Marine	January		10.8	1.0	Haris and Riley (1956)
		January		10.0	0.9	
		April		9.3	0.7	
		April		8.4	0.7	
		July		9.8	1.1	
		November		5.6	0.6	
		X		8.9	0.8	

APPENDIX B: FILTERING RATES REPORTED FOR FRESHWATER ZOOPLANKTERS

1. Literature data are presented on the filtering rates of freshwater filter-feeding zooplankton herein. Columnar headings of the appendix are described as follows.

TAXON. The arrangement is by family then by species. Within a family, entries are in alphabetical order with general results listed at the end of the appropriate taxon. Some taxonomic corrections have been made to the original data.

LENGTH AND WEIGHT. Organism length in millimetres (mm) and weight in milligrams (mg) are presented, if known. Weights are expressed as either dry weight (mg dry) or as wet weight (mg wet). In some cases estimates of these values were made.

LIFE STAGE. The developmental stage of the organism is presented. For Copepods, development proceeds from nauplius to copepodie to adult stages.

TEST LOCALITY. Laboratory studies are indicated by "Lab." Field studies give the field locality by water body and state abbreviation if it is in the U. S., otherwise by water body and country.

TEST METHOD. The basic experimental method used to determine filtering or feeding rates is listed.

TEMPERATURE. The experimental temperature in degrees Celsius is given.

TYPE OF FOOD. The food type used during the experiments is given. Field studies using the entire available food spectrum are designated "natural assemblage."

RANGE OF FOOD CONCENTRATIONS TESTED. Values are presented as cells per millilitre (cells/ml) unless otherwise indicated. Field studies in which the food concentration was not actually measured have been designated as "in situ." Many values were approximated from figures presented by the author.

RANGE OF MEASURED FILTERING RATES. All values are expressed as millilitres per animal per day (ml/animal/day). We have converted values presented in other time frames to a daily basis. Many values were approximated from figures presented by the author. Mean filtering values are also indicated when known.

REFERENCE. The sources of the data are presented.

2. In addition to the definitions described above, the following abbreviations and symbols with their definitions have been used in the appendix.

a. The following abbreviations have been used to describe Life Stage:

A = Adult
AS = All sizes
AF = Adult female
F = Female, age not stated
AM = Adult male
M = Male, age not stated
CI-CVI = Copepodid stages I through VI

b. The following abbreviations have been used to describe the Test Method used:

32P = Radioactive tracer technique using phosphorus 32
14C = Radioactive tracer technique using carbon 14
CC = Cell count
CCC = Coulter counter
PL = Phytoplankton loss
OD = Oxygen depletion

c. The following abbreviations have been used to describe Temperature:

RT = Room temperature
AB = Ambient temperature
V = Variable temperature

d. Other abbreviations used include:

? = Unknown
$\bar{X}$ = Mean value
Ca. = Approximately
avg. max. = Average maximum value
C = Carbon
μ = Micron = 10^{-6} metres
μ^3 = Cubic microns
< = Less than
> = Greater than
NA = No significant filtering occurred

3. Appendix footnotes a through n are described below:

a. Filaments of Anabaena supp., Aphanizomenon flos-aquae, and Oscillatoria tenuis and/or Gleatilia sp.

b. Based on Ivanova (1970).

c. Based on Monakov and Sorokin (1960).

d. Ivanova (1970) says the temperature was 20°C, Monakov (1972) says it was 15°C.

e. Includes Diaptomus graciloides.

f. Includes Diaptomus gracilis.

g. Ivanova (1970).

h. It was assumed that the experiments were conducted at the same temperature that the algal cultures were incubated, but this is not stated by the authors.

i. Includes Diaptomus oregonensis.

j. Includes Diaptomus

k. Based on a summary of data from other authors.

l. Daphnia cucullata and Daphnia hyalina.

m. This entry may be based on the same data from Erman (1956) and reported by Pilarska (1977a) under the name B. uriceolaris although the measured filtering rates are slightly different.

n. Kryutchkova and Rybak (1974) say the food was Scenedesmus sp. at a concentration of 13.6×10^3 cells/ml.

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or Weight (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCES
ORDER: CLADOCERA Family: Sididae									
Diaphanosoma brachyurum	0.0053 mg dry	?	?	?	?	Chlorella pyrenoidosa	$6x10^{-5}$ mg dry wt/ml	10	Sushchenya (1958a,b) as reported by Jorgensen (1966)
Diaphanosoma brachyurum	?	?	L. Erken, Sweden	?	?	Nanoplankton	In situ	1	Nauwerck (1959) as reported by Jorgensen (1966)
Diaphanosoma brachyurum	?	A	Lab	?	?	?	?	15.6	Beljackaja-Potaenko (1964) as reported by Gliwicz (1970)
Diaphanosoma brachyurum	0.9-1.4 mm	AS	Heart L., Canada	^{32}P	AB	Natural assemblage plus yeast tracer	In situ	0-5.7 ($\bar{X}$=1.6)	Haney (1973)
Diaphanosoma brachyurum	?	AS	Drowned Bog L., Canada	^{32}P	AB	Natural assemblage plus yeast tracer	In situ	0.98-1.4 ($\bar{X}$=1.2)	Haney (1973)
Diaphanosoma brachyurum	?	?	Lab	^{14}C	V	Nanoplankton 33	Variable	ca. 0.45-2.73($\bar{X}$=1.33)	Gulati (1978)
Family: Holopedidae									
Holopedium gibberum	?	AS	Drowned Bog L., Canada	^{32}P	AB	Natural assemblage plus yeast tracer	In situ	7.5-12.4($\bar{X}$=9.4)	Haney (1973)
Holopedium gibberum	1.00 mm 0.074 mg wet	?	Lab	^{14}C	17.9-21.1	Natural assemblage from L. Krivoye, USSR	Natural concentration	6.33-22.87	Gutel'mackher (1973)
Family: Chydoridae									
Chydorus sphaericus	?	A	Lab	?	?	?	?	9.8	Beljackaja-Potaenko (1964) as reported by Gliwicz (1970)
Chydorus sphaericus	0.1-0.2	AS	Heart L., Canada	^{32}P	AB	Natural assemblage plus yeast tracer	In situ	0.03-0.42($\bar{X}$=0.18)	Haney (1973)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCES
Family: Bosmidae									
Bosmina longirostris	0.002 mg dry	?	?	?	?	Chlorella pyrenoidosa	$1.5x10^{-4}$ mg dry wt/ml	2.6	Sushchenya (1958a,b) as reported by Jorgensen (1966)
Bosmina longirostris	0.44 mm 0.013 mg wet	?	Lab	^{14}C	17.9-21.1	Natural assemblage from L. Krivoye, USSR	Natural concentration	1.61-4.93	Gutel'mackher (1973)
Bosmina longirostris	0.4-0.6 mm	AS	Heart L., Canada	^{32}P	AB	Natural assemblage plus yeast tracer	In situ	0.009-0.9($\bar{X}$=0.44)	Haney (1973)
Bosmina longirostris	?	AS	Drowned Bog L., Canada	^{32}P	AB	Natural assemblage plus yeast tracer	In situ	0.45-0.46($\bar{X}$=0.46)	Haney (1973)
Bosmina longirostris	?	?	Lab	^{14}C	V	Nanoplankton 33	Variable	ca. 0.3-7.2($\bar{X}$=2.0)	Gulati (1978)
Bosmina longirostris	0.4 mm	A	Lab	^{32}P	RT	Natural assemblage[a] Lyngbya sp. mixed w/ Scenedesmus sp.	? Variable	0.6-1.0($\bar{X}$=0.8) 0.4	Webster and Peters (1978)
Bosmina coregoni	0.01 mg dry	?	?	?	?	Bacteria	$2x10^{-4}$ mg dry wt/ml	10	Manuilova (1958) as reported by Jorgensen (1966)
Bosmina coregoni	?	?	L. Erken, Sweden	?	?	Nanoplankton	In situ	1	Nauwerck (1959) as reported by Jorgensen (1966)
Bosmina coregoni	?	A	Lab	?	?	?	?	40.1	Beljackaja-Potaenko (1964) as reported by Gliwicz (1970)
Family: Daphnidae									
Simocephalus vetulus	0.09 mg dry	?	?	?	?	Chlorella pyrenoidosa	$5x10^{-5}$ mg dry wt/ml	133	Sushchenya (1958a,b) as reported by Jorgensen (1966)
Simocephalus vetulus	0.012 mg dry	?	?	?	?	Bacteria	$2x10^{-4}$ mg dry wt/ml	26	Manuilova (1958) as reported Jorgensen (1966)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCES
Simocephalus vetulus	0.7-2.5 mm 0.007-0.127 mg dry	?	Lab	?	22	Chlorella sp.	1.8×10^{6}-4.5×10^{6}	0.13-18.0	Ivanova and Klekowski (1972)
Simocephalus vetulus	1.8 mm	A	Lab	^{32}P	RT	Natural assemblage[a] Lyngbya sp. mixed w/ Scenedesmus sp.	? Variable	21-48($\bar{X}$-33) 3.9	Webster and Peters (1978)
Ceriodaphnia pulchella	?	?	Lab	^{14}C	V	Nanoplankton 33	Variable	ca. 0.6-3.0 ($\bar{X}$=1.82)	Gulati (1978)
Ceriodaphnia quadrangula	0.7-0.9 mm	AS	Heart L., Canada	^{32}P	AB	Natural assemblage	In situ	0.4-7.7($\bar{X}$=4.6)	Haney (1973)
Ceriodaphnia quadrangula	0.7 mm	A	Lab	^{32}P	RT	Natural assemblage[a] Lyngbya sp. mixed w/ Scenedesmus sp.	? Variable	4.8($\bar{X}$=5.7) 1.1	Webster and Peters (1978)
Ceriodaphnia reticulata	0.8 mm	?	Pond water taken to lab, Michigan	^{14}C	25	Natural assemblage	1.4×10^{3}-5.9×10^{5} particles/ml	0.38-5.95	O'Brien and DeNoyelles (1974)
Ceriodaphnia reticulata	0.00003 mg	?	Lab	^{14}C	15-27	Chlorella vulgaris	1.0×10^{5}	0.79-2.06	Gophen (1976)
Daphnia ambigua	1.2 mm	A	Lab	^{32}P	RT	Natural assemblage[a] Lyngbya sp. mixed w/ Scenedesmus sp.	? Variable	4-13($\bar{X}$=8.2) 7.7	Webster and Peters (1978)
Daphnia carinata	0.070 mg dry	A	Lab	CC	27	Escherichia coli and Flavobacterium sp.	2.6×10^{4}-3.1×10^{8}	6.2-21.6	Tezuka (1971)
Daphnia cucullata	0.0055 mg dry	?	?	?	?	Bacteria	2×10^{-4} mg dry wt/ml	14	Manuilova (1958) as reported by Jorgensen (1966)
Daphnia cucullata	?	A	Lab	?	?	?	?	43	Beljackaja-Potaenko (1964) as reported by Gilwicz (1970)
Daphnia galeata mendotae	1.30-1.53 mm	?	Heart L., Canada water taken to lab	^{32}P	AB	Natural assemblage	In situ	3.7	Burns and Rigler (1967)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP, (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCES
Daphnia galeata mendotae	ca. 0.8-2.2 mm ca. 0.006-0.095 mg dry	AS	Lab	^{32}P	15-25	Rhodotorula glutinus	$2.5x10^4$	ca. 2.3-45.4	Burns (1969b)
Daphnia galeata	1.5-1.7 mm	AS	Heart L., Canada	^{32}P	AB	Natural assemblage	In situ	1.9-20.8 ($\tilde{X}$=6.4)	Haney (1973)
Daphnia galeata	0.91-1.29 mm	?	L. George, NY water taken to lab	^{14}C	19-24	Natural assemblage	In situ	2.6-11.0	Bogdan and McNaught (1975)
Daphnia galeata	1.4 mm	AS	Wintergreen L., MI	^{32}P	AB	Natural assemblage	In situ	0.8-5.4	Haney and Hall (1975)
Daphnia galeata	1.1-2.1 mm	AS	Lawrence L., MI	^{32}P	AB	Natural assemblage	In situ	6.2-20.3	Haney and Hall (1975)
Daphnia galeata	?	AS	Little Mill L., MI	^{32}P	AB	Natural assemblage	In situ	2.5-16.2	Haney and Hall (1975)
Daphnia galeata	1.3-1.7 mm	A	Three Lakes, MI	^{32}P	AB	Natural assemblage	In situ	47 avg. max.	Haney and Hall (1975)
Daphnia longispina	0.0083 mg dry	?	?	?	?	Bacteria	$2x10^{-4}$ mg dry wt/ml	23	Manuilova (1958) as reported by Jorgensen (1966)
Daphnia longispina hyalina	?	?	L. Erken, Sweden water taken to lab	^{14}C	?	Nanoplankton	In situ	0.5-4.6 ($\tilde{X}$=2.3)	Nauwerck (1963) as reported by Burns and Rigler (1967)
Daphnia longispina	0.12 mg wet[b]	?	Lab[c]	^{14}C[c]	15[d]	Chlorococcum sp. Bacteria	$5.5x10^3$-$92x10^3$ $2.4x10^6$-$79x10^6$	2.9-17.2 0.2-5.4	Monakov and Sorokin (1961) as reported by Monakov (1972)
Daphnia longispina	0.0116 mg dry	?	?	^{14}C	?	?	$2.2x10^{-3}$ mg dry wt/ml	4.8	Shushkina and Pecen' (1964) as reported by Ivanova (1970)
Daphnia longispina	0.011 mg dry	A	Lab	CC	20	Mixed bacteria	$3.3x10^4$-$4.4x10^4$	1.7.19	Tezuka (1971)
Daphnia magna	?	?	?	?	?	Chlorella pyrenoidosa	$7x10^{-2}$ mg dry wt/ml	8	Lefevre (1942) as reported by Jorgensen (1966)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCES
Daphnia magna	2.5-2.9 mm 0.095-0.135 mg dry	AF	Lab	CC	18-20	Chlorella vulgaris Navicula pelliculosa Scenedesmus quadricauda	$5x10^4$-$6x10^5$ $5x10^4$-$5x10^5$ $4x10^4$-$4.6x10^5$	4.4-79.6 10.6-48.5 8.3-25.7	Ryther (1954)
Daphnia magna	0.13 mg dry	A	?	?	?	Chlorella pyrenoidosa	$2x10^{-3}$ mg dry wt/ml	?	Sushchenya (1958a,b) as reported by Jorgensen (1966)
Daphnia magna	0.23-0.27 mg dry	AF	Lab	^{32}P	?	Saccharomyces cerevisiae	ca. $5x10^3$-$9.6x10^5$	ca. 7-96	Rigler (1961a)
Daphnia magna	1.25-3.54 mm 0.01-0.44 mg dry	AF	Lab	^{32}P	20	Chlorella vulgaris	$1x10^4$-$2x10^5$	ca. 10.8-104.4	McMahon (1965)
	2.8-3.3 mm 0.22-0.34 mg dry				5-35	Saccharomyces cerevisiae	$1x10^4$-$6x10^5$	ca. 0.9-143.3	
Daphnia magna	2.8-3.3 mm 0.22-0.34 mg dry	AF	Lab	^{32}P	20	Escherishia coli Chlorella vulgaris Saccharomyces cerevisiae Tetrahymena pyriformis	$5x10^5$-$1x10^7$ $1x10^4$-$1x10^6$ ca. $2x10^4$-$1x10^6$ ca. $1x10^2$-$3x10^3$	ca. 13.4-81.6 ca. 12.6-67.2 ca. 5.2-24.0 ca. 20-84	McMahon and Rigler (1965)
Daphnia magna	ca. 1.3-3.3 ca. 0.023-0.28 mg dry	AS	Lab	^{32}P	15-25	Rhodotorula glutinus	$2.5x10^4$	ca. 6.5-141.3	Burns (1969b)
Daphnia magna	0.112-0.164 mg dry	?	Lab	CLC	18	Chlorella vulgaris	ca. $0.6x10^3$ ^{3}- $22x10^3$ ^{3}/ml	ca. 36-98	Kersting and Leeuw-Leegwater (1976)
Daphnia middendorffiana	1.3-2.6 mm	A	Lab	^{14}C	5.2-11.5	Natural assemblage w/ Chlamydomonas reinhardti added as a tracer	ca. $2.6x10^3$-$83x10^3$	ca. 3-177	Chisholm, Stross, and Nobbs (1975)
Daphnia parvula	0.7-1.2	AS	Heart L., Canada	^{32}P	AB	Natural assemblage	In situ	2.5-5.2($\bar{X}$-3.8)	Haney (1973)
Daphnia parvula	?	AS	Drowned Bog L., Canada	^{32}P	AB	Natural assemblage	In situ	1.6	Haney (1973)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCES
Daphnia pulex	0.68-1.86 mm 0.003-0.03 mg dry	F	Lab	CC	20	Chlamydomanas reinhardti	$25x10^3$-$100x10^3$	0.8-5.5	Richman (1958)
Daphnia pulex	0.32 mg wet	?	Lab	?	15[d]	Chlorococcum sp.	$3x10^{-7}$-$1.4x10^{-5}$ mg dry wt/ml[e]	3-64[g]	Monakov and Sorkin (1961) as reported by Monakov (1972)
Daphnia pulex	Variable	A	Lab	CC	21[h]	Chlamydomonas reinhardti	$2x10^5$-$5x10^5$	0.5-6.2	Stross, et. al. (1965)
Daphnia pulex	ca. 0.6-1.5 mm ca. 0.003-0.034 mg dry	AS	Lab	32_P	15-25	Rhodotorula glutinus	$2.5x10^4$	ca. 1.2-15.5	Burns (1969b)
Daphnia pulex obtusa	ca. 0.8-3.0 mm ca. 0.027-1.40 mg dry	AS	Lab	CC	22.2	Scenedesmus abandans	$6.8x10^5$-$20.4x10^5$	32.3-45.5	Kryutchkova and Sladecek (1969)
Daphnia pulex	0.036 mg dry	A	Lab	CC	25	Bacteria mixed w/ Microcystis aeruginosa	$3.1x10^4$-$2.6x10^5$	4.8-6.2	Tezuka (1971)
						Escherichi coli	40-$1.3x10^4$	5.5-14.2	
Daphnia pulex	0.7-2.8 mm 0.003-0.056 mg dry	AF	Lab	CC	22	Chlamydomonas reinhardti	$3x10^4$	ca. 1-200	Buikema (1973)
Daphnia pulex	2.0 mm	AF	Lab	32_P	20	Rhodotorula sp. with and without seston	Variable	ca. 6-37	Crowley (1973)
Daphnia pulex	0.7-3.5 mm	F	Lab	14_C	15	Scenedesmus cutus	ca. $1x10^{-4}$-$3.3x10^{-3}$ C/ml	ca. 2.2-52.3	Geller (1975)
Daphnia pulex	0.8-2.4 mm	AS	Little Mill L., MI	32_P	AB	Natural assemblage	In situ	2.8-25.6	Haney and Hall (1975)
Daphnia pulex	1.5-2.7 mm	AS	Three Lakes, MI	32_P	AB	Natural assemblage	In situ	2.5-125.0	Haney and Hall (1975)
Daphnia pulex	?	A	Lab	32p	12-18	Chlamydomonas reinhardti	$5x10^5$	3.1-9.1	Starkweather (1975)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCES
Daphnia pulex	1.8 mm	AF	Lab	CC	20	Ankistrodesmus sp.	ca. 1 x 10^4	1.3	Hayward and Gallup (1976)
Daphnia pulex	1.9 mm	A	Lab	^{32}P	RT	Natural assemblage[a] Lyngbya sp. mixed w/ Scenedesmus sp.	? Variable	20-45($\bar{X}$=35) 9.6	Webster and Peters (1978)
Daphnia rosea	0.64-1.85 mm	AS	Lab	^{32}P	20	Rhodotorula glutinis	2.5x10^4-5x10^5	1.9-42.0	Burns and Rigler (1967)
Daphnia rosea	1.15-1.38 mm	?	Heart L., Canada water taken to lab	^{32}P	AB	Natural assemblage	In situ	3.6	Burns and Rigler (1967)
Daphnia rosea	1.65-1.85 mm	A	Lab	^{32}P	5-25	Chlamydomonas sp.	2.5x10^4	ca. 0.9-1.4	Kibby (1971a)
Daphnia rosea	1.3-1.6 mm	AS	Heart L., Canada	^{32}P	AB	Natural assemblage	In situ	1.7-20.8($\bar{X}$=5.5)	Haney (1973)
Daphnia schodleri	ca. 0.8-2.5 mm ca. 0.006-0.13 mg dry	AS	Lab	^{32}P	15-25	Rhodotorula glutinis	2.5x10^4	ca. 2.3-64.9	Burns (1969b)
Daphnia schodleri	1.2-2.4 mm 1.5-2.0 mm	AF, AM AF	Lab	CC	5-30	Ankistrodesmus sp. Chlamydomonas sp. Frustulia sp. Anabaena sp. Aphanizomenon sp.	ca. 1.7x10^3-1.2x10^4 ca. 3 x 10^4 ca. 8.9x10^3 ? ?	ca. 3.6-49.2 ca. 24 max. ca. 26 max. NS NS	Hayward and Gallup (1976)
Daphnia spp.[l]	?	?	Lab	^{14}C	V	Nanoplankton 33	Variable	ca. 1.3-9.1($\bar{X}$=3.8)	Gulati (1978)
Mixed community but primarily Daphnia spp.	0.037 mg dry	AS	Canyon Ferry Reservoir, MT	PL	AB	Natural assemblage	3.8x10^{-4}-9.0x10^{-4} mg dry wt/ml	ca. 39	Wright (1958)
Generalized cladoceran[k]	0.001-0.01 mg dry	?	?	OD	?	Variable	2x10^{-4}-4x10^{-2} mg dry wt/ml	0.1-11.5	Ivanova (1970)
ORDER: COPEPODA Family: Diaptomidae									
Diaptomus gracilis[e]	0.011 mg dry	?	?	?	?	Chlorococcus sp.	?	4.1	Malovitskaya and Sorokin (1961) as reported by Jorgensen (1966)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCES
Diaptomus gracilis	?	?	?	?	?	Melosira sp. and Asterionella sp.	$24.2x10^3$-$198.0x10^3$	0.68-1.96	Malovitskaya and Sorokin (1961) as reported by Kryutchkova and Ryback (1974)
Diaptomus gracilis	?	F, M	Queen Elizabeth II Reservoir, C. B., water taken to lab	^{14}C	4-14.5	Natural assemblage	$2x10^2$-$7.3x10^3$	0.83-2.40	Kibby (1971b)
Diaptomus gracilis	?	F, M	King George IV Reservoir, G.B., water taken to lab	^{14}C	7-15	Natural assemblage	$9.7x10^2$-$8.2x10^3$	1.09-1.97	Kibby (1971b)
Diaptomus gracilis	?	F, M	Lab	^{14}C	5-20 12-20 20	Chlorella sp. Scenedesmus sp. Diplosphaeria sp. Ankistrodesmus sp. Carteria sp. Nitzchia sp. Pediastrum sp. Haematococcus sp. Bacteria	$3x10^4$	0.61.2.40 0.94-1.32 1.76-2.54 1.61-2.45 0.87 1.96 0.02 2.16 0.19	Kibby (1971b)
Diaptomus gracilis	?	AM, AF	L. Balaton, Hungary	^{14}C	AB	Natural assemblage	0.42-1.90 gC/ml	0.01-3.27	Zankai and Ponyi (1976)
Diaptomus gracilis	?	?	Lab	^{14}C	V	Nanoplankton 33	Variable	ca. 1.8-20.0($\bar{X}$-5.6)	Gulati (1978)
Diaptomus graciloides	0.01 mg dry	?	L. Erken, Sweden	?	AB	Natural assemblage	?	0.3-3	Nauwerck (1959 as reported by Jorgensen (1966) and Kryutchkova and Ryback (1974)
Diaptomus graciloides[f]	0.011 mg dry	?	?	?	?	Chlorococcus sp.[n]	$13.6x10^3$ [n]	4.1	Malovitskaya and Sorokin (1961) as reported by Jorgensen (1966)
Diaptomus graciloides	?	A	Lab	?	?	?	?	35.0	Beljackaja-Potaenko (1964) as reported by Gliwicz (1970)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCES
Diaptomus graciloides	1.04 mm 0.010 mg wet	?	Lab	^{14}C	17.9-21.1	Natural assemblage from L. Krivoye, USSR	In situ	0.41-1.00	Gutel'mackher (1973)
Diaptomus graciloides	0.253-0.959 mm	AS	Lab	?	17.5-24.5	Chlamydomonas eugametos	$1x10^3$ - $12x10^3$	2.4-3.4	Kryutchkova and Ryback (1974)
Diaptomus leptopus	?	?	?	?	?	Chlamydomonas sp.	$50x10^3$	1.0-1.8	Schindler and Comita (1966) as reported by Kryutchkova and Ryback (1974)
Diaptomus minutus	0.87-0.97 mm X=0.003 mg dry	?	?	?	?	Plankton	?	0.5-2.9	Bogdan and McNaught (1975)
Diaptomus pallidus	?	AF, AM	Little Mill L.,MI	^{32}P	AB	Natural assemblage	In situ	0.60-1.54	Haney and Hall (1975)
Diaptomus pallidus[1]	?	A	Three Lakes, MI	^{32}P	AB	Natural assemblage	In situ	0.26-1.66 ($\bar{X}$=0.83)	Haney and Hall (1975)
Diaptomus oregonensis	0.011 mg dry	AF	L. Winnebago, WI	^{14}C	22-23	Nanoplankton (90% Chlorella sp.)	In situ ($30-1x10^5$)	0.058-0.074	Richman (1964)
Diaptomus oregonensis	0.011 mg dry	AF	Lab	^{14}C	22-23	Nanoplankton	$30-1x10^5$	0.097-0.139	Richman (1964)
Diaptomus oregonensis	?	?	Lab	^{14}C	20?	Chlamydomonas reinhardti Chlorella vulgaris	$1.5x10^3$-$5x10^5$ $2.5x10^3$-$4.1x10^5$	ca. 0.1-3.5 ca. 0.1-3.0	Richman (1966)
Diaptomus oregonensis	?	CV, AF	Marion L., B. C., water taken to lab	CLC	18	Natural assemblage 70	175-7,461	1.49-12.90	McQueen (1970)
Diaptomus oregonensis	?	CV, AF	Lab	CLC	18	Chromulina scherfellii Chlorella pyrenoidosa Ochronomas sp. Chlamydomonas sp. Chryptomonas sp. Navicula spp.	2,100 20,700 20,000 23,000 19,700 247-22,675	1.50 1.33 1.68 1.43 1.07 0 2.07	McQueen (1970)
Diaptomus oregonensis	1.0-1.4 mm	AS	Heart L. Canada	^{32}P	A	Natural assemblage	In situ	0-1.4 ($\bar{X}$=0.48)	Haney (1973)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCE
Diaptomus oregonensis	?	AS	Drowned Bog L., Canada	^{32}P	A	Natural assemblage	In situ	2.1-2.2	Haney (1973)
Diaptomus oregonensis[j]	?	AS	Three Lakes, MI	^{32}P	A	Natural assemblage	In situ	0.26-1.66 ($\bar{X}$-0.83)	Haney and Hall (1975)
Diaptomus siciloides	?	F	Lab	CLC	10-20	Pandorina morum or Chlamydomonas sp.	?	1-2	Comita (1964)
Family: Centropagidae									
Boeckella delicata	0.0101 mg dry for AF, AM	AS	L. Koutu, New Zealand, water taken to lab	^{14}C	20?	Natural assemblage w/ yeast tracer	$1.2x10^5$	0.043-0.419	Green (1975)
Calamoecia lucasi	ca. 0.00015-0.00123 mg dry	AS	Lab	^{14}C	20	Saccharomyces cerivisae	$1x10^3$-$6x10^4$	ca. 0.01-1.43	Green (1975)
Calamoecia lucasi	?	AS	Campus Pond, New Zealand, water taken to lab	^{14}C	20?	Natural assemblage w/ yeast tracer	?	0.006-0.753	Green (1975)
Calamoecia lucasi	?	F, M	L. Koutu, New Zealand, water taken to lab	^{14}C	20?	Natural assemblage w/ yeast tracer	$1.2x10^6$	0.506-0.549	Green (1975)
Limnocalanus macrurus	?	CI-CVI, A	Lab	^{32}P?	0.2	Scenedesmus sp. or Chlamydomonas sp.	Natural range found in Char and Resolute Lakes, Canada	0.42-3.05	Kibby and Rigler (1973)
PHYLUM: ROTATORIA Family: Branchionidae									
Brachionus calyciflorus	?	?	?	?	20	Variable	?	0.0312-0.319	Erman (1962) as reported by Doohan (1973) and Pourriot (1977)

APPENDIX B (Continued)

TAXON	LENGTH (mm) and/or WEIGHT (mg)	LIFE STAGE	TEST LOCALITY	TEST METHOD	TEMP. (°C)	TYPE OF FOOD	RANGE OF FOOD CONCENTRATIONS TESTED (cells/ml)	RANGE OF MEASURED FILTERING RATES (ml/animal/day)	REFERENCE
Brachionus calyciflorus	?	?	?	CC	19-20	Scenedesmus obliguus	$5x10^5$	ca. 0.024	Galkovskaya (1963)
Brachionus calyciflorus	?	?	?	?	?	?	?	0.576	Galkovskaya (1965) as reported by Pilarska (1977a)
Brachionus calyciflorus	?	?	?	?	?	Chlorella pyrenoidosa	$5x10^5$	0.0142-0.087	Halbach and Halbach-Keup (1974) as reported by Pilarska (1977a)
Brachionus calyciflorus	?	A	Lab	^{32}P	?	Euglena gracilis	$5x10^4$	0.024-0.025	Starkweather and Gilbert (1977)
Brachionus pilcatilis	?	?	?	?	?	Synechococcus sp.	$8x10^6$	0.073	Ito (1955) as reported by Doohan (1973)
Brachionus pilcatilis	0.000158 mg for adults	?	Lab	^{14}C	20	Dunaliella salina	$5.9x10^5$-$1.44x10^6$	0.015-0.036	Doohan (1973)
Brachionus rubens	?	?	?	?	?	?	$5x10^5$	ca. 0.024	Erman (1956) as reported by Doohan (1973)
Brachionus rubens[m]	?	?	?	?	20	Scenedesmus acuminatus	$1x10^4$ coenobia	0.106 maximum	Erman (1956) as reported by Pourriot (1977)
Brachionus rubens	0.00013 mg dry	AF	Lab	^{14}C	20	Chlorella vulgaris	$1.2x10^4$-$1.0x10^7$	ca. 0.002-0.270	Pilarska (1977a)
Brachionus arceolaris	?	?	?	?	?	Scenedesmus acuminatus	$1x10^4$ coenobia	0.015-0.120	Erman (1956) as reported by Pilarska (1977a)
Keratella cochlearis	?	A	Lab	?	?	?	?	0.168	Erman (1956) as reported by Gliwicz (1970)
Kellicottia sp.	?	?	Drowned Bog L., Canada	^{32}P	AB	Natural assemblage	In situ	0.007	Haney (1973)
Family: Philodinavidae									
Philodina roseola	?	?	?	?	?	?	?	0.024	Erman (1956) as reported by Pourriot (1977)

APPENDIX C: ZOOPLANKTON AND BENTHOS ASSIMILATION EFFICIENCIES

Definitions of Abbreviations and Symbols Used in Appendix C

A	assimilation
G	consumption
A/G	assimilation efficiency (mg C/mg C/day) x 100
E	excretion
F	egestion
R	respiration
P	total production
Pg	production as growth
Pev	production as exuvia
Pr	production as reproduction
Ps	production as secretion
^{14}C	carbon 14 radioisotope
$^{14}CO_2$	labeled carbon dioxide respired (may be used to represent excretion)
cpm	counts per minute (radioactivity)
VS	varied seasonally
°C	degrees Centigrade
ca	approximately
ml	millilitre
mg	milligram
cm^2	square centimeter
ℓ	litre
@	at
?	unknown or could not be determined from data
$\bar{X}$	mean value
%	percent
<	less than
AFDW	ash-free dry weight

Definitions of Experimental Methods Listed in Appendix C

Method 1. $A/G - (G - F)/G$

Method 2. $A/G = (^{14}HC \text{ in body} + {}^{14}CO_2)/(^{14}C \text{ in body} + {}^{14}CO_2 + F)$

Method 3. $A/G = {}^{14}CO_2/({}^{14}CO_2 + F)$

Method 4. $A/G = (PG + Pr + R)/G$

Method 5. Radiosotope (type not specified)

Method 6. $A/G = (G - F - E)/G$

Method 7. $A.G = (PG + R)/G$

Method 8. $A/G = (Pg + Pev + Ps + R)/G$

Method 9. $A/G = (^{14}C \text{ ingested} - F)/{}^{14}C \text{ ingested}$

Method 10. $A/G = (Pg + Pev + R)/G$

Method 11. $A/G = {}^{14}C \text{ in body}/(^{14}C \text{ in body} + F + E)$

Method 12. $A/G = ((\text{calories/cpm } {}^{14}C)(^{14}C\text{/individual}))/((^{14}C \text{ consumed})(\text{calories/cpm } {}^{14}C))$

Method 13. $A/G = {}^{14}C \text{ in body}/{}^{14}C \text{ consumed}$

Method 14. $A/G = {}^{32}P \text{ in body}/{}^{32}P \text{ consumed}$

Method 15. $A/G = (^{14}C \text{ in body} + {}^{14}CO_2)/{}^{14}C \text{ consumed}$

Method 16. Ash-ratio (see text for details)

Method 17. $A.G = (^{32}P \text{ in body and eggs})/(^{32}P \text{ in body} + F)$

Method 18. $A.G = (Pr + R)/G$

Method 19. $A/G = (^{14}C \text{ consumed} - F - {}^{14}CO_2)/{}^{14}C \text{ consumed}$

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation efficiency (%)	Reference
PHYLUM: MOLLUSCA						
Class: Pelecypoda						
Scrobicularl plana	0.5-22.5	organic sediment	1	Based on field population energy budget	60.6	Hughes (1970)
Dreissena polymorpha	?	bacteria @ $5x10^6$ cells/ml	2	Based on a carbon budget for an individual; A/G is inversely proportional to age	44.1-57.8($\bar{X}$=49.4)	Sorokin (1969)
Class: Gastropoda						
Ancylus fluviatilis	7-25	algae	1	Based on a field population carbon budget	49.4-54.6	Streit (1976)
Bittium varium	?	sterilized detritus	3	Based on a carbon budget for an individual; three-day experimental period	46.3	Adams and Angelovic (1970)
		unsterilized detritus			48.6	
Littorina irrorata	?	detritus	?		45.0	Odum and Smalley (1959) as cited by Hughes (1970)
Lymnaea palustris	14.9-15.2	aufwuchs	1	Based on a carbon budget for an individual	44.0-71.9($\bar{X}$=59.9)	Hunter (1975)
Valvata pulchella	?	dead *Scenedesmus* sp.	2	Based on a carbon budget for an individual	14	Monakov and Sorokin (1972)
PHYLUM: NEMATODA						
Class: Adenophorea						
Plectus palustris	20	bacteria @ 6.7-13.5 calories/ml	4	Based on an energy budget for an individual; ^{14}C used to determine C	12	Duncan et al. (1974)
PHYLUM: ANNELIDA						
Class: Oligochaeta						
Tubifex tubifex	16-18	sediment	1	Based on an energy budget for an individual	47.1-60.0($\bar{X}$=50.4)	Ivlev (1939)

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Class: Polychaeta						
Neanthes virens	13-17	*Nephtys hombergii*	1	Based on an energy budget for an individual	82.1-88.9	Kay and Brafield (1972)
PHYLUM: ARTHROPODA Class: Insecta Order: Diptera						
Hedriodiscus truquii	35-41	algae	1	Based on an energy budget for an individual; instars I-III	56.0-67.5	Sweeney and Schnack (1977)
Simulium sp.	?	?	5		9.4-65.7	McCullough (1975) as cited by Sweeney and Schnack (1977)
Tipula abdominalis	?	?	5		33	Vannote (1969) as cited by Sweeney and Schnack (1977)
Order: Ephemeroptera						
Hexagenia limbata	19.5-26.5	surface sediment	6	Based on an energy budget for an individual	62-72 ($\bar{X}$=68)	Zimmerman et al. (1975)
Stenonema pulchellum	20	*Navicula minima*	7	Based on an energy budget for an individual	46.4-56.9($\bar{X}$=53.1)	Trama (1972)
Tricorythodes minutes	?	?	5		6.4-55.2	McCullough (1975) as cited by Sweeney and Schnack (1977)
Order: Tricoptera						
Neophylax concinnus	?	?	?		20.6-54.7	Sedell (1971) as cited by Sweeney and Schnack (1977)
Cheumatopsyche sp.	?	?	5		45.9-49.1	McCullough (1975) as cited by Sweeney and Schnack (1977)

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Glossoma nigrior	VS	algae	7	Based on a field population energy budget; winter	13.6-20.6	Cummins (1975)
				summer	31.5-32.3	
Potamophylax cingulatus	VS	leaf litter detritus	8	Based on a field population energy budget; October	29	Otto (1975)
				November	28	
				December	27	
				January	17	
				February	10	
				March	10	
				April	11	
				May	19	
				June	25	
				July	26	
Order: Megaloptera						
Corydalus cornutus		chironomids		Mean of 5 acclimation groups	85.8	Brown (1978)
Order: Odonata						
Pyrrhosoma nymphula	4	*Daphnia* sp.	1	Based on a dry weight biomass budget for an individual	85.2	Lawton (1970)
	10	*Daphnia* sp.			86.2	
	15	*Daphnia* sp.			81.2-87.2	
	15	Chironomidae			84.0	
	15	*Asellus* sp.			76.9	
	15	*Cloeon* sp.			90.6	
	15	*Daphnia* sp.	1	Based on an energy budget for an individual	86.2-86.8	Lawton (1970)
	15	Chironomidae			86.8	
	15	*Asellus* sp.			82.8	
	15	*Cloeon* sp.			91.3	
Lestes sponsa	20	*Daphnia magna* and *Tubifex tubifex*	7	Based on an energy budget for an individual	35-46	Fischer (1972)
Order: Plecoptera						
Acroneuria californica	17	*Hydropsyche* and *Simulium* sp.	1	Based on an energy budget for an individual; A/G miscalculated in Table 2 of reference	80.8	Heiman and Knight (1975)
	18	*Simulium* sp.			89.2-94.6	
	18	*Hydropsyche* sp.			86.8	

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Pteronarcys scotti	5-10	leaves	1	Based on an energy budget for an individual	8.5-15.9($\bar{X}$=10.6)	McDiffett (1970)
Class: Crustacea Subclass: Malacostraca Order: Mysidacea						
Mysis stenolepsis	?	hay-detritus cellulose	9	Based on a carbon budget for an individual	20-35 35-50	Foulds and Mann (1978)
Neomysis mirabilis	19.9-21.1	algae @ 0.01-0.1 mg dry weight/l	2	Based on a carbon budget for an individual	85	Pechen'-Finenko (1977)
Order: Euphausiacea						
Euphausia pacifica	ca. 10	Three marine algal species and nauplii of *Artemia* sp.	5 and 10	Based on a carbon budget for an individual	66-95 ($\bar{X}$ = 84)	Lasker (1966)
Order: Decapoda						
Palaemonetes pugio	26	*Nitzschia closterium*	1	Based on a carbon budget for an individual	78-79	Johannes and Satomi (1967)
Palaemonetes pugio	?	detritus detritus and bacteria	3	Based on a carbon budget for an individual; three-day experimental period	28.3-72.7 82.0-90.9	Adams and Angelovic (1970)
Order: Isopoda						
Asellus aquaticus	10	slightly decayed alder leaves	1	Based on an energy budget for an individual:		Prus (1971)
				nonovigerous females	40.8	
				ovigerous females	43.6	
				male	33.2	
				density: 1/12.6 cm^2	30.3	
				5/33.2 cm^2	35.2	
				10/33.2 cm^2	40.2	
				20/33.2 cm^2	40.2	
				annual mean	30.0	
			16		55.8	

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Order: Amphipoda						
Calliopius laeviusculus	12	Calanus sp.	1	Based on a carbon budget for an individual	87-95	Dagg (1976)
	12	Cosinmdiscus angstii			92-96	
	8	Calanus sp.			83-95	
	15	Calanus sp.			90	
Gammarus pseudolimnaeus	17	elm leaves	1	Based on an energy budget for an individual	18.6	Barlocher and Kendrick (1975)
		maple leaves			17.2	
		fungi			67.9-83.2 ($\bar{X}$=76.9)	
Gammarus pulex	2-15	alder leaves	1	Based on an energy budget for an individual	30-40	Nilsson (1974)
		beech leaves			0-35	
Hyalella azteca	15	surface sediment and microflora	11	Based on an energy budget for an individual	15	Hargrave (1971)
Subclass: Brachiopoda Order: Anostraca						
Artemia salina	17.9-21.1	algae @ 0.11-27.9 calories/l	2	Based on a carbon budget for an individual; A/G constant over wide range of food concentrations	73	Pechen'-Finenko (1977)
Branchinecta gigas	15-20	Diaptomus nevadensis and Brachinecta mackini	1	Based on an energy budget for an individual; male	67.2	Daborn (1975)
				female	93.9	
Order: Cladocera						
Polyphemus pediculus	?	juvenile Polyphemus pediculus	2	Based on a carbon budget for an individual	42	Monakov and Sorokin (1972)
Leptodora kindtii	VS	natural prey	estimate	Only P and yield were directly measured	40	Cummins et al. (1969)
Leptodora kindtii	16-17	primarily Cladocera	4	Based on an energy budget for an individual	87	Hillbricht-Ilkowska and Karabin (1970)

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Daphnia longispina	15	Microcystis sp. @ 0.01 mg/ml	12		17.9	Schindler, J. E. (1971)
		Oocystis sp. @ 0.01 mg/ml			10.5	
		Elakatothrix sp. @ 0.01 mg/ml			ca. 100	
		Gloeocystis sp. @ 0.01 mg/ml			13.6	
		Anabaena sp. @ 0.01 mg/ml			50.8	
		Tribonema sp. @ 0.01 mg/ml			68.6	
		Coelastrum sp. @ 0.01 mg/ml			20.8	
		Oscillatoria sp. @ 0.01 mg/ml			25.6	
		Asterionella sp. @ 0.01 mg/ml			38.4	
		Ankistrodesmus sp. @ 0.01 mg/ml			ca. 100	
		Cryptomonas sp. @ 0.01 mg/ml			91.6	
Daphnia longispina	?	Chlorococcus sp. and bacteria	2		10-25	Monakov and Sorokin (1960) as cited by Conover (1964)
Daphnia longispina	?	Chlorella sp.	2		42	Monakov and Sorokin (1972)
		bacteria			50	
Daphnia longispina	15	Chlorella sp.	?		42.5	Sorokin (1966a) as cited by Monakov (1972)
Daphnia pulex	?	sterile dissolved organic matter	2	A/C is inversely related to food concentration	2	Monakov and Sorokin (1972)
		dissolved organic matter and microflora			24	
Daphnia pulex	20	Chlamydomonas sp. @ 25,000 cells/ml	4	Based on a field population energy budget	31.7	Richman (1958)
		@ 50,000 cells/ml			20.2	
		@ 75,000 cells/ml			16.8	
		@ 100,000 cells/ml			14.2	
Daphnia magna	20	Chorella sp. @ 1 mg/l	12	Based on an energy budget for an individual; estimated from Figure 9 of reference	60-84	Schindler, D. W. (1968)
		@ 2.5 mg/l				
		@ 5 mg/l				
		@ 10 mg/l				
Daphnia schodleri	10	Ankistrodesmus sp. @ 10,000 cells/ml	13	Based on an energy budget for an individual; A/C is inversely related to food concentration	90	Hayward and Gallup (1976)
		@ 20,000 cells/ml			88	
		@ 30,000 cells/ml			73	
		@ 40,000 cells/ml			60	

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Daphnia schodleri (Cont.)	20	Ankistrodesmus sp. @ 10,000 cells/ml			70	
		@ 20,000 cells/ml			77	
		@ 30,000 cells/ml			99	
		@ 40,000 cells/ml			76	
Daphnia sp.	?	algae	14	C was estimated from cell counts	8-25	Cohn (1958) as cited by Conover (1964)
Bosmina longirostris	17.9-21.1	phytoplankton	15	Based on a carbon budget for an individual	22.5-31.9	Gutel'mackher (1973)
		bacteria			8.7-10.2	
Bosmina longirostris	15	Chlorella sp.	2		43	Sorokin (1966a) as cited by Monakov (1972)
Bosmina coregoni	19-21	Stephanodiscus sp.	2		47.1	Semenova (1974)
		Chlorella sp.			45.3	
		bacteria			35.3-55.0	
		detritus			24.2	
		Diatoma sp.			51.2	
		Scenedesmus sp.			52.7	
		Staurastrum sp.			34.2	
		Anabaena sp.			10.4	
		Oscillatoria sp.			77.4	
		Microcystis sp.			9.5	
		Ankistrodesmus sp.			10.7	
Holopedium gibberrum	17.9-21.1	phytoplankton	15		32.8-47.3	Gutel'mackher (1973)
		bacteria			10.3-10.8	
Simocephalus vetulus	22	Chlorella sp.	7	Based on an energy budget for an individual; 1 day old	44.0	Ivanova and Klekowski (1972) as cited by Klekowski et al. (1972)
				4 days old	74.3	
				7 days old	72.4	
				9 days old	54.1	
				12 days old	41.0	
				16 days old	34.8	
				20 days old	31.7	
Simocephalus espinosus	15	Chlorella sp. up to 10 mg/l	15	Based on a carbon budget for an individual	46.1	Sorokin (1969)

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Ceriodaphnia reticulata	?	Chlorella sp. Scenedesmus obliguus Chlamydomonas nivalis Ankistrodesmus falcatus	7	Based on an energy budget for an individual	75.5-91.2 ($\bar{X}$= 85.7) 47.0-71.4 ($\bar{X}$=62.6) 6.2-13.1 ($\bar{X}$=9.6) 66.3-88.8 (X=80.6)	Czeczuga and Bobiatynska-Ksok (1972)
Sida crystallina	?	Chlorella sp. Aphanizomenon sp. Anabaena sp. Microcystis sp.	2	Based on a carbon budget for an individual; estimated from Figure 4 of reference	99 75 20 17	Monakov and Sorokin (1972)
Eurycercus lamellatis	17	detritus	1	Based on an energy budget for an individual; 1-7 days old 8-12 days old	7.7 32.2	Smirnov (1962)
Subclass: Copepoda						
Calanus hyperboreus	2 5 8	Thalassiosira flaviatilis @ 1.2x10^9-3.0x10^9 cells/animal	1	Based on a dry weight biomass budget for an individual	13.0-38.9 ($\bar{X}$=27.6) 19.0-49.7 ($\bar{X}$=32.7) 13.4-29.9 (X=21.7)	Conover (1962)
Calanus hyperboreus	4	Exuviella sp. @ 1.8 mg/ml	1 16	Based on a dry weight biomass budget for an individual	72.1 69.0	Conover (1966a)
Calanus hyperboreus	2	Thalassiosira fluviatilis @ 6.4 mg dry weight/l; @ 1.7 mg dry weight/l Ditylum brightwellii @ 0.6 mg dry weight/l	?	Copepodid IV Copepodid V Copepodid V Copepodid V	44.0 47.6 71.1 53.0	Conover (1964)
	5	Thalassiosira fluviatilis @ 6.7 mg dry weight/l; @ 1.7 mg dry weight/l Thalassiosira nordenskioldii @ 2.6 mg dry weight/l Rhizoselenia setigera @ 1.4 mg dry weight/l		Copepodid IV Copepodid V Copepodid V Copepodid V Copepodid V	52.7 50.9 64.1 39.6 63.1	
	4	Thalassiosira fluviatilis @ 0.3 mg dry weight/l; @ 1.8 mg dry weight/l		Copepodid V Copepodid V	57.2 56.2	

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Calanus finmarchicus	14.5	*Skeletonema* sp. @ 2.6×10^5 cells/ml	17	Based on biomass balance for an individual; copepodid I	48.0-91.5 ($\bar{X}$=68.9)	Marshall and Orr (1956)
				copepodid II	77.8-82.6 ($\bar{X}$=80.8)	
		Ditylum sp. @ 57 cells/ml		nauplius VI	93.3-95.9 (X=94.7)	
Calanus finmarchicus	10-20	*Skeletonema costatum* @ 14 cells/ml	17	Based on a biomass balance for an individual; adults	51.4-66.2 ($\bar{X}$=61.5)	Marshall and Orr (1955b)
		@ 72 cells/ml			49.9-68.1 ($\bar{X}$=57.3)	
		@ 288 cells/ml			40.1-67.9 ($\bar{X}$=54.5)	
		Syracosphaera sp. @ 720 cells/ml			96.9-99.1 ($\bar{X}$=98.1)	
		Bacillus globigii spores @ 9520 cpm/ml			4.0-12.8 ($\bar{X}$=8.7)	
		Chaetocerns sp. @ 11,500 cells/ml			72.1-94.5 ($\bar{X}$=80.2)	
		diatoms @ 10,500 cells/ml			96.7-99.0 ($\bar{X}$=97.5)	
		@ 343 cells/ml			96.8-98.2 (X=97.5)	
		Ditylum sp. @ 122 cells/ml			67.0	
		Lauderia borealis @ 6-1,590 cells/ml			49.0-95.0 ($\bar{X}$=78.1)	
		flagellates @ 20-2.4×10^6 cells/ml			15.0-98.7 ($\bar{X}$=77.0)	
		dinoflagellates @ 5-2.0×10^4 cells/ml			43.0-99.0 (X=84.3)	
Calanus sp.	?	diatoms, flagellates, *Artemia* sp. nauplii	1	Based on a carbon budget for an individual	10-99	Mullin (1963) as cited by Conover (1964)
Acartia clausi	17.9-21.1	algae @ 0.04-30.0 mg dry weight/l	2	Based on a carbon budget for an individual	66-73	Pechen'-Finenko (1977)
Calanoecia lucasi	20	yeast	?	Males	63.5	Green (1975)
				Females	67.4	
Diaptomus siciloides	20	*Pandorina morum* or *Chlamydomonas* sp.	18	Based on a field population energy budget; the experimental period was 24 hours	40.0-82.9 ($\bar{X}$=60.0)	Comita (1964)
Diaptomus gracilis	15	*Microcystis* sp.	12	Based on an energy budget for an individual	45.3	Schindler, J. E. (1971)
		Oocystis sp.			13.7	
		Elakatothrix sp.			31.3	
		Clogocystis sp.			44.2	
		Anabaena sp.			73.5	
		Ankistrodesmus sp.			49.4	
		Tribonema sp.			19.9	
		Coelastrum sp.			29.1	
		Oscillatoria sp.			29.7	
		Asterionella sp.			20.1	
		Cryptomonas sp.			ca. 100	

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Diaptomus gracilis	20	Chlorella sp. @ < 30,000 cells/ml	19		68.4	Kibby (1971b)
	12				67.3	
	5				64.2	
	20	Scenedesmus sp.			39.7	
	12				41.3	
	20	Diplosphaeria sp.			78.0	
	12				69.2	
	20	Ankistrodesmus sp.			74.3	
	12				69.1	
	ca. 5	mixed algae @ 213 cells/ml		March	38.3	
	ca. 7	@ 4336 cells/ml		April	44.2	
	ca. 12	@ 636 cells/ml		May	63.3	
	ca. 14	@ 1233 cells/ml		June	58.4	
	ca. 17	@ 7313 cells/ml		July	60.7	
	ca. 17	@ 689 cells/ml		August	39.0	
	ca. 16	@ 513 cells/ml		September	44.5	
	ca. 15	@ 204 cells/ml		October	44.7	
Diaptomus oregonensis	22-23	?	estimate	Only filtering rate and R were measured	77	Richman (1964)
Diaptomus graciloides	20	Chlamydomonas sp. @ 0.5-10 mg wet weight/l and Chlorella vulgaris @ 0.5-5 mg wet weight/l	4	Based on an energy budget for an individual; nauplius	14-33 ($\bar{X}$=23.7)	Kryutchkova and Ryback (1974)
				copepodid	16-64 ($\bar{X}$=34.0)	
				adult	8-28 ($\bar{X}$=18.3)	
				mean	13-52 ($\bar{X}$=29.0)	
Diaptomus gracioloides	17.9-21.1	algae @ 0.04-30.0 mg dry weight/l	2	Based on a carbon budget for an individual; A/G is constant over wide range of food concentrations	81	Pechen'-Finenko (1977)
Diaptomus graciloides	17.9-21.1	phytoplankton	14	Based on a carbon budget for an individual	81.5-93.6	Gutel'mackher (1973)
		bacteria			21.7-24.4	
Macrocyclops albidus	21	Paramecium sp. @ 100/l	7	Based on a field population energy budget	45-50	Klekowski and Shushkina (1966a)
Cyclops vicinus	?	infusoria	2	Based on a carbon budget for an individual	80	Monakov and Sorokin (1972)

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Cyclops strenuus	15	*Daphnia* sp.	12	Based on an energy budget for an individual	50	Schindler, J. E. (1971)
Subclass: *Ostracoda*						
Cypridopsis vidua	15	*Chlorella* sp. *Potamogeton* sp. fungi *Potamogeton* sp. as detritus *Potamogeton* sp. as sterile detritus	2	Based on a carbon budget for an individual	69.2 88.1 63.1 84.6 61.5	Luferova and Sorokin (1970) as cited by Monakov (1972)
Dolerocypris fasciata	15	*Chlorella* sp. *Potamogeton* sp. fungi yeast	2	Based on a carbon budget for an individual	44.2 72.7 62.7 66.9	Luferova and Sorokin (1970) as cited by Monakov (1972)
Dolerocypris fasciata	15	bacteria	2	Based on a carbon budget for an individual; A/G is inversely related to age	43-57 ($\bar{X}$=48.8)	Monakov and Sorokin (1972)
Entomostraca	?	?	?		58.4	Sushchenya (1969)
Entomostraca	VS	bacteria and phytoplankton	2	Based on a carbon budget for an individual	51.7	Sorokin (1972)
PHYLUM: ROTATORIA						
Rotatoria	VS	bacteria and phytoplankton	2	Based on a carbon budget for an individual; average of several species	53	Sorokin (1972)
Asplanchna sp.	?	variable	2	Based on a carbon budget for an individual; A/G is inversely related to food concentration	16-22	Sorokin and Mordukhai-Boltovskaya (1962)
Brachionus plicatilis	20	*Dunaliella salina* @ 4.4 calories/ml	13	Based on a carbon budget for an individual	19.4	Doohan (1973)

APPENDIX C (Continued)

Taxon	Temperature (°C)	Food and concentration	Experimental method	Comments	Assimilation Efficiency (%)	Reference
Brachionus rubens	20	Chlorella vulgaris @ $1.2x10^4$-$1x10^7$ cells/ml	4	Based on an energy budget for an individual; age I age II age III ovigerous females	12.2-52.0 12.2-55.8 13.2-57.8 15.1-68.8	Pilarska (1977a)
				Based on a carbon budget for an individual; age I - III ovigerous females	23.0-23.8 30.8-32.3	
Brachionus calyciflorus	19-20	Scenedesmus obliguus and Lagerheimia ciliata	7	Based on a field population energy budget; A/G was inversely related to food concentration	21-52	Galkovskaya (1963)
Brachionus sp.	VS	natural assemblage	6	Based on a field population energy budget; calculations based on 2 species	52.6	Comita (1972)
Kerratella quadrata	VS	natural assemblage	6	Based on a field population energy budget	73.4	Comita (1972)
Keratella cochlearis	VS	natural assemblage	6	Based on a field population energy budget	38.3	Comita (1972)
Polyarthra vulgaris	VS	natural assemblage	6	Based on a field population energy budget	81.8	Comita (1972)
Filina longiseta	VS	natural assemblage	6	Based on a field population energy budget	56.9	Comita (1972)