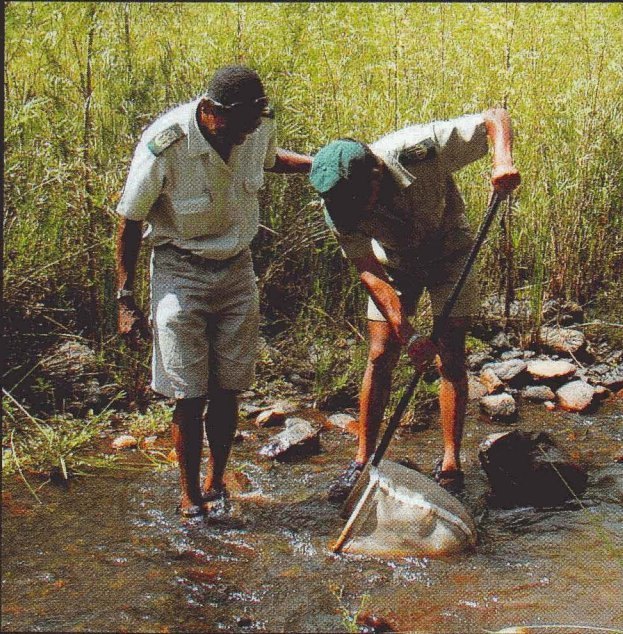


Aquatic Invertebrates of South African Rivers

Illustrations

A Gerber

MJM Gabriel



Version 2, April 2002



Institute for Water Quality Studies
Department of Water Affairs and Forestry

EPHEMEROPTERA - Mayflies

Inserts depict approximate size

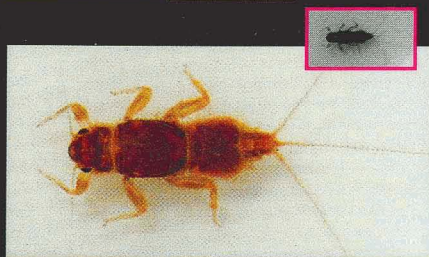


Mature

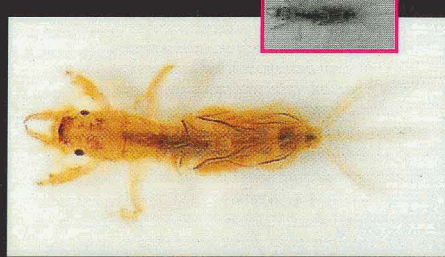
Young



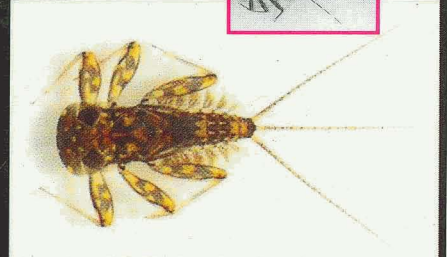
Baetidae - small minnow mayflies



Caenidae - cainflies



Polymitarcyidae
pale burrowers



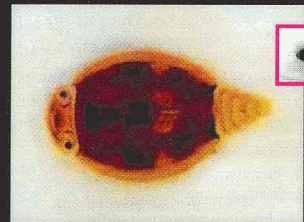
Heptageniidae
flat-headed mayflies



Teloganodidae
spiny crawlers



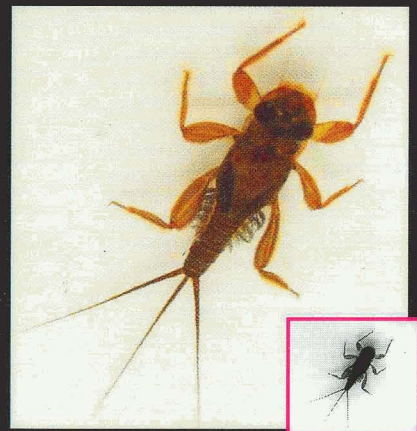
Oligoneuridae
brushlegged mayflies



Prosopistomatidae
water specs



Leptophlebiidae
prongills



Tricorythidae
stout crawlers

TRICHOPTERA - Caddisflies

Inserts depict approximate size

CASELESS Caddisflies

Hydropsychidae species



Hydropsyche sp.



Macrostemum capense



Cheumatopsyche afra type



Cheumatopsyche thomasseti type



Amphisyche scottae



Actual size

Polymorphanisus bipunctatus



Aethaloptera maxima

CASELESS Caddisflies

Inserts depict approximate size



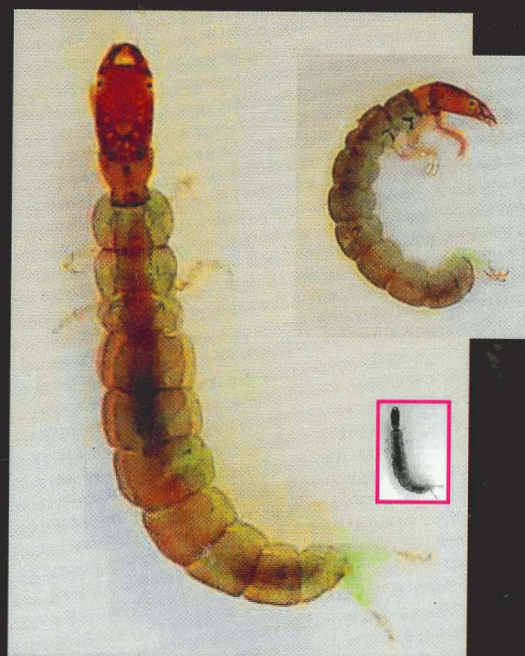
Polycentropodidae



Philopotamidae



Ecnomidae



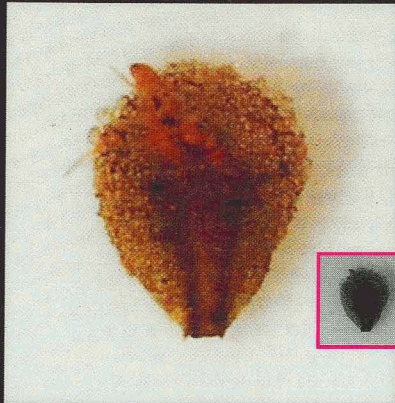
Parecnomina



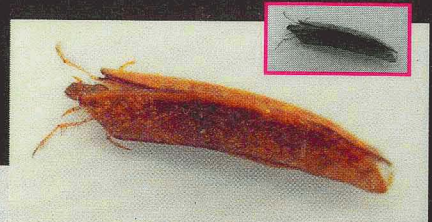
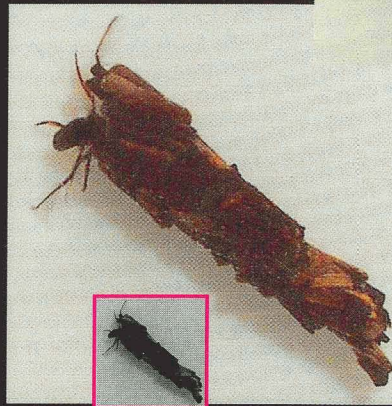
Psychomyiidae

CASED Caddisflies

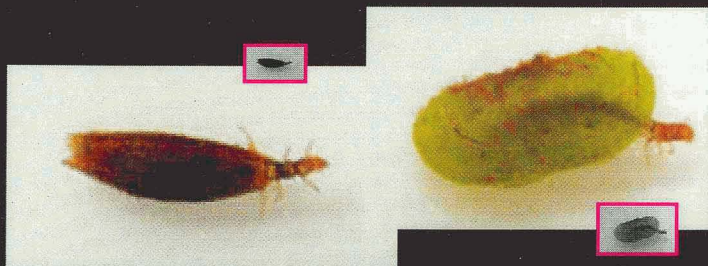
Inserts depict approximate size



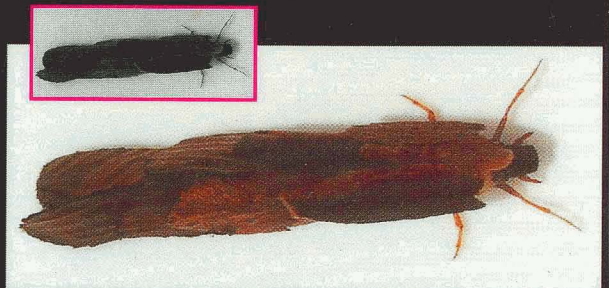
Petrothrincidae



Leptoceridae



Hydroptilidae



Pisuliidae



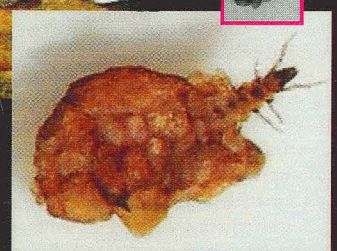
Barbarochthonidae



Sericostomatidae

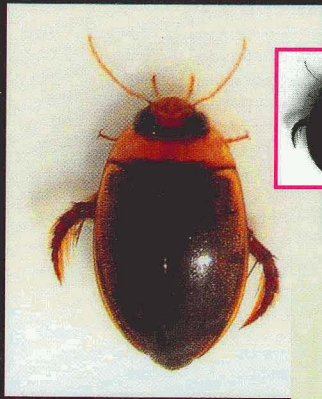


Glossosomatidae

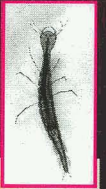
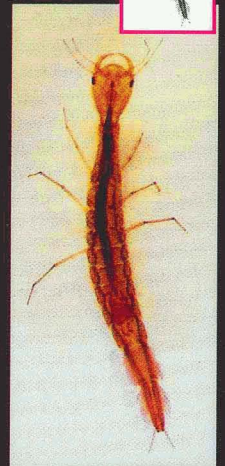
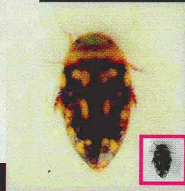


COLEOPTERA - Beetles

Inserts depict approximate size

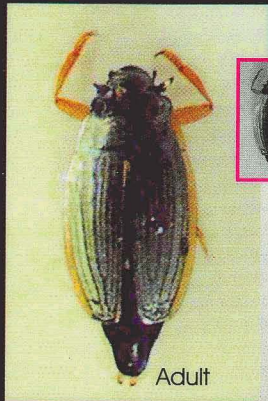


Male showing suckers on front legs

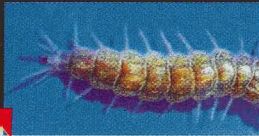


Dytiscidae - predacious diving beetles

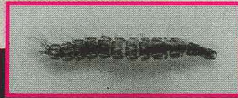
Dytiscidae larvae



Adult



Larva



Gyrinidae - whirligig beetles



Hydraenidae
minute moss beetles



Adult



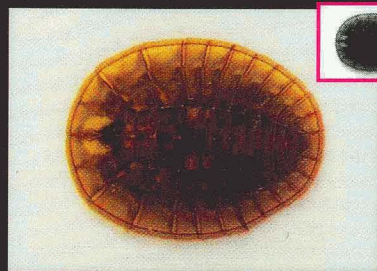
Elmidae - riffle beetles



Elmidae larvae



Helodidae
marsh beetles



Psephenidae - water pennies



Adult



Adult



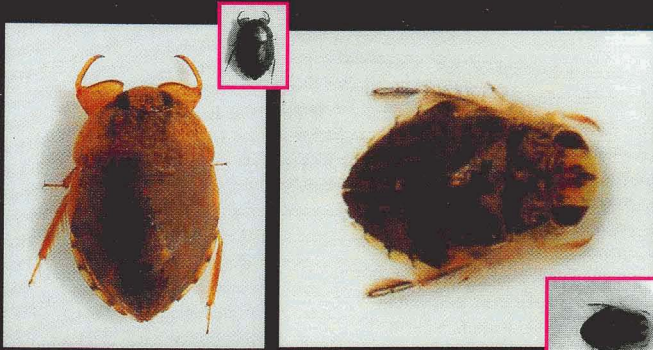
Larva



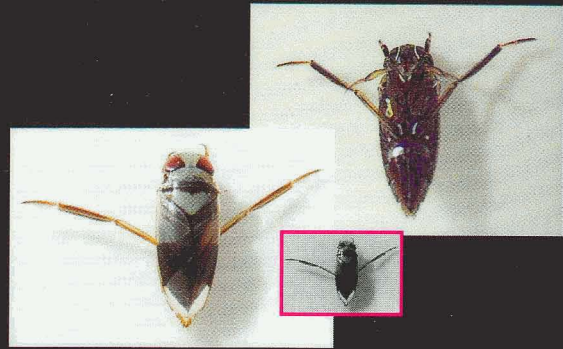
Hydrophilidae - water scavenger beetles

HEMIPTERA - Bugs

Inserts depict approximate size



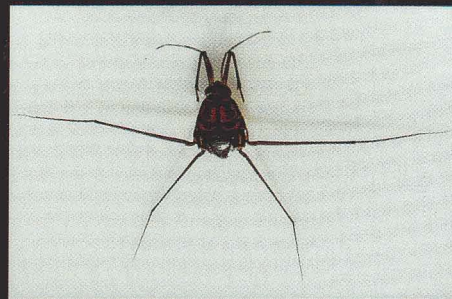
Naucoridae - creeping water bugs



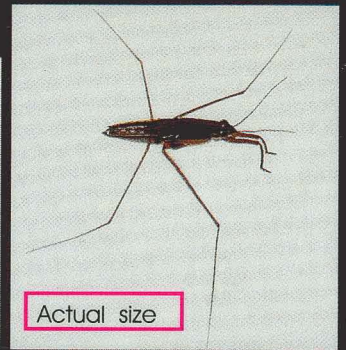
Notonectidae - backswimmers



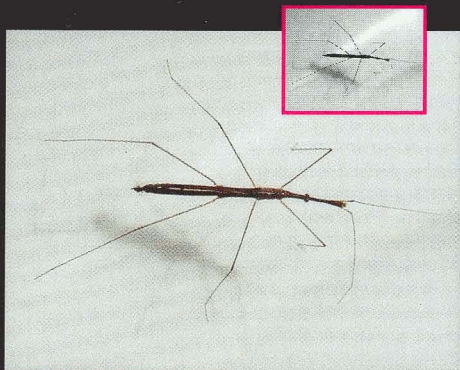
Belostomatidae - giant water bugs



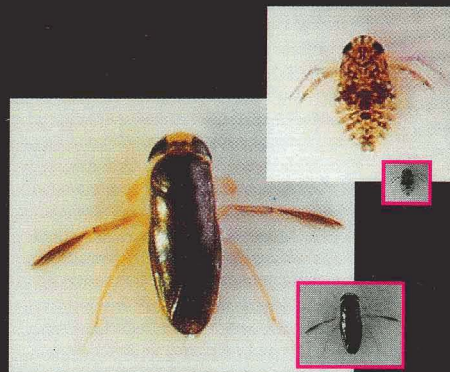
Gerridae - pond skaters



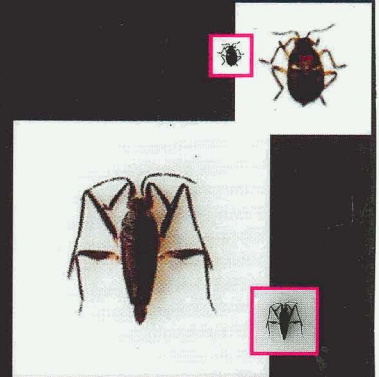
Actual size



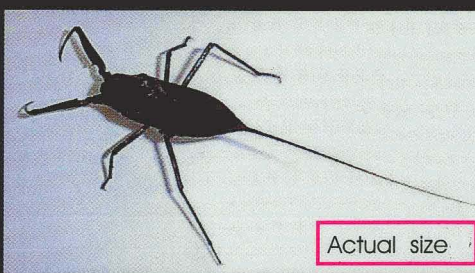
Hydrometridae
marsh treaders



Corixidae - water boatmen



Veliidae - ripple bugs



Nepidae - water scorpions



Actual size



Pleidae - pygmy backswimmers



side view

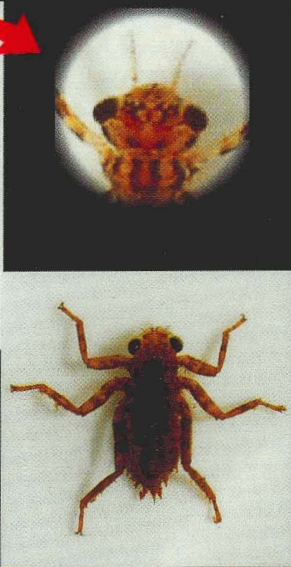
ODONATA - Dragonflies

Images 2 x actual size unless stated otherwise

ANISOPTERA - Dragonflies



Libellulidae



Corduliidae



Actual size



Aeshnidae



Gomphidae

ZYGOPTERA - Damselflies

Inserts depict approximate size



Actual size

Calopterygidae



Chlorocyphidae



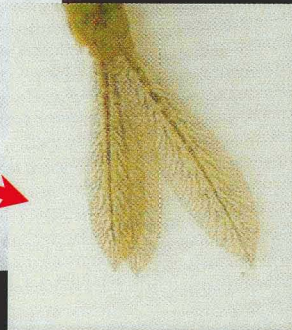
Platycnemididae



Protoneuridae



Coenagrionidae



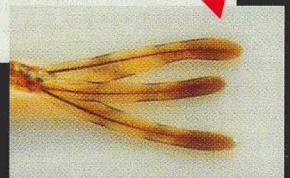
Actual size

Chlorolestidae



Actual size

Lestidae

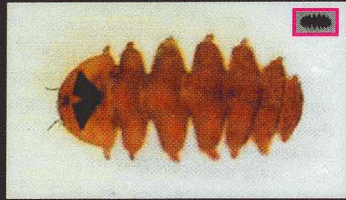


DIPTERA - Flies

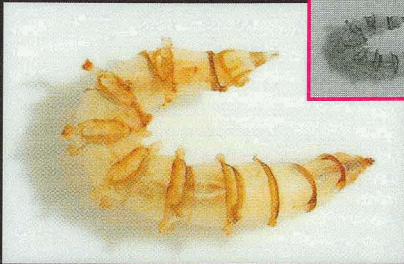
Inserts depict approximate size



Athericidae - snipe flies



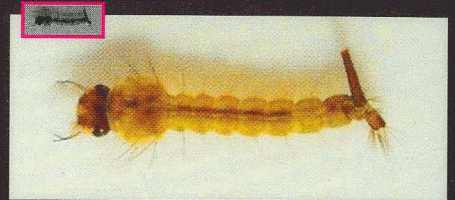
Blephariceridae
net-winged midges



Tabanidae - horse flies



Psychodidae - moth flies



larvae

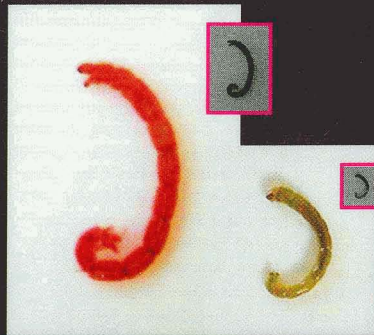
Culicidae
mosquitoes



pupa



Dixidae
meniscus midges



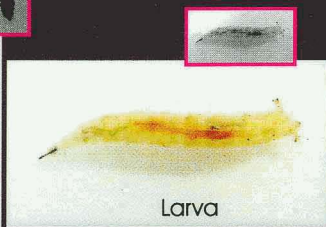
Chironomidae
midges



Ceratopogonidae
biting midges

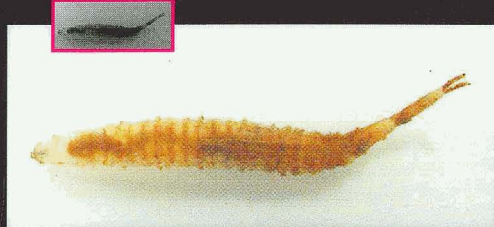


pupa



Larva

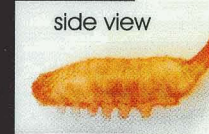
Muscidae - house flies



Ephydriidae - brine flies

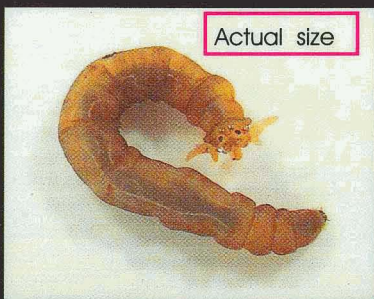


Actual size

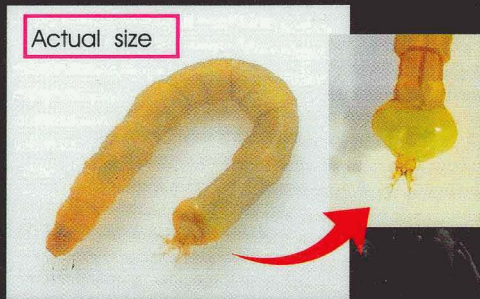


side view

Syrphidae
rat tailed maggots

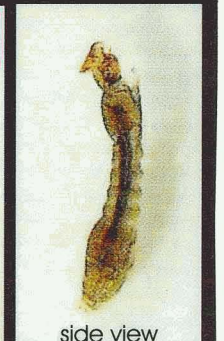


Actual size



Actual size

Tipulidae - crane flies



side view

Simuliidae - black flies

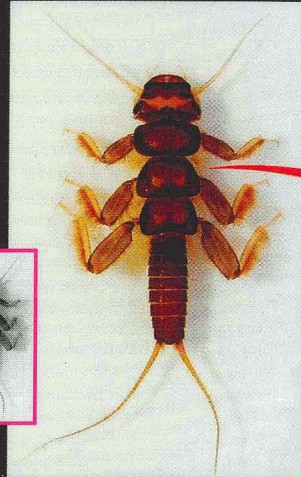
Inserts depict approximate size

PLECOPTERA

TURBELLARIA



Planaria - flatworms



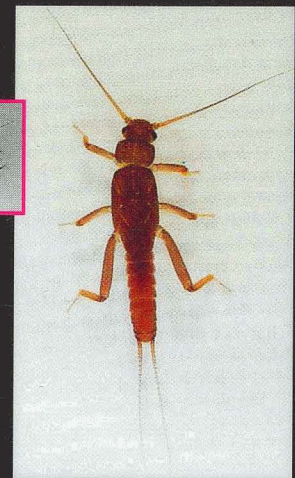
Perlidae
stoneflies



LEPIDOPTERA



Pyralidae - aquatic caterpillars



Notonemouridae
stoneflies

HYDRACARINA



Hydrachnellae - water mites

MEGALOPTERA

Actual size



Corydalidae
dobsonflies



Plecoptera Turbellaria Lepidoptera Megaloptera Hydracarina

CRUSTACEA



Potamonautidae - crabs



Approximate size

Palaemonidae - freshwater prawns

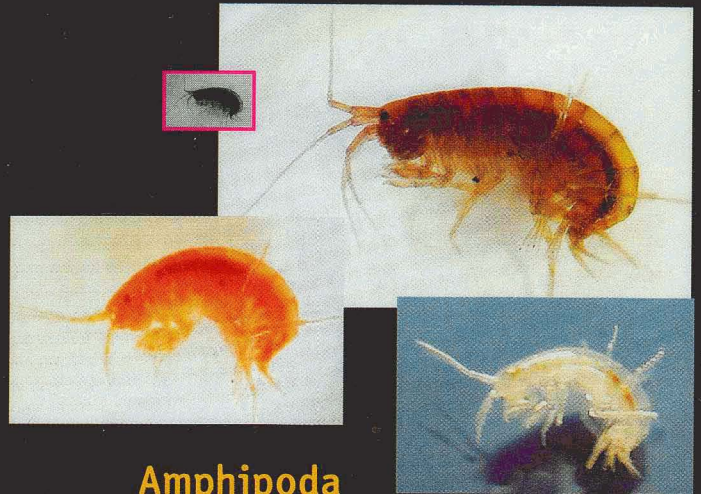
PORIFERA



Actual size

Porifera - freshwater sponges

Inserts depict approximate size



Amphipoda
sideswimmers



Atyidae - shrimps

ANNELIDA



Actual size

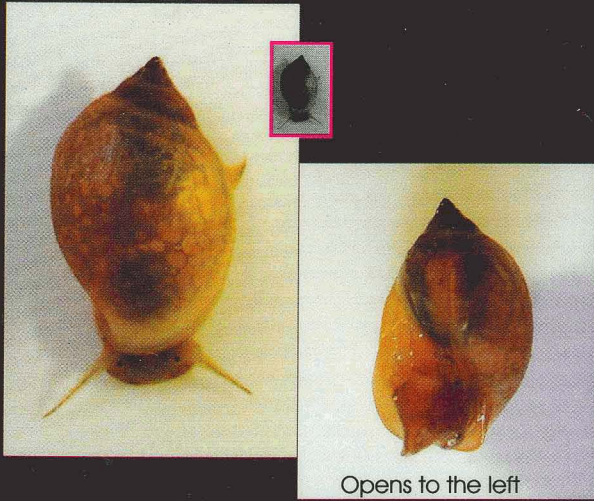
Hirudinea
leeches



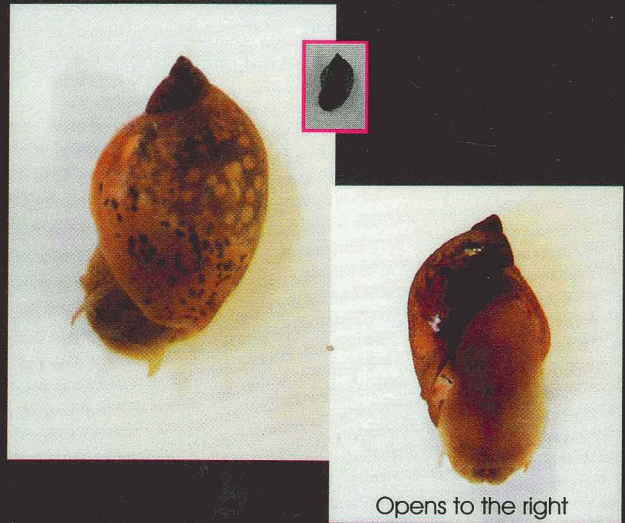
Oligochaeta
aquatic earthworms

MOLLUSCA - Snails, Limpets

Inserts depict approximate size



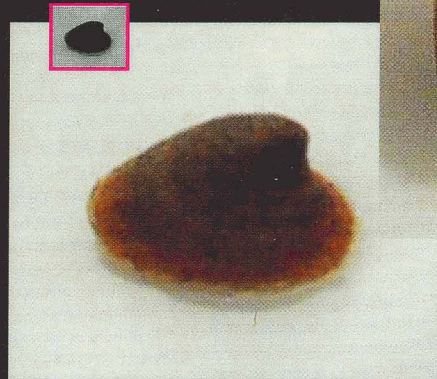
Physidae - pouch snails



Lymnaeidae - pond snails



Planorbidae - orb snails



Ancyliidae - freshwater limpets



Thiariidae



Unionidae - pearly mussels



Sphaeriidae



Corbiculidae

The original publication was available from:
Director: Resource Quality Services
Department of Water Affairs
Private Bag X313
Pretoria
0001

Tel 012 808 9500
Fax 012 808 2702

compiled by
Annelise Gerber