

*INTRODUCTION TO ENTOMOLOGY
AND MATCHING THE HATCH*

*COLORADO WOMEN FLYFISHERS
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Udden

TRUE FLIES "DIPTERA" COMPLETE METAMORPHOSIS

LARVAE

- No tails
- Antennae minute
- No legs; body appears as a segmented tube.
- Colors may vary in the Midge family from light tan , tan, brown, green, red and black

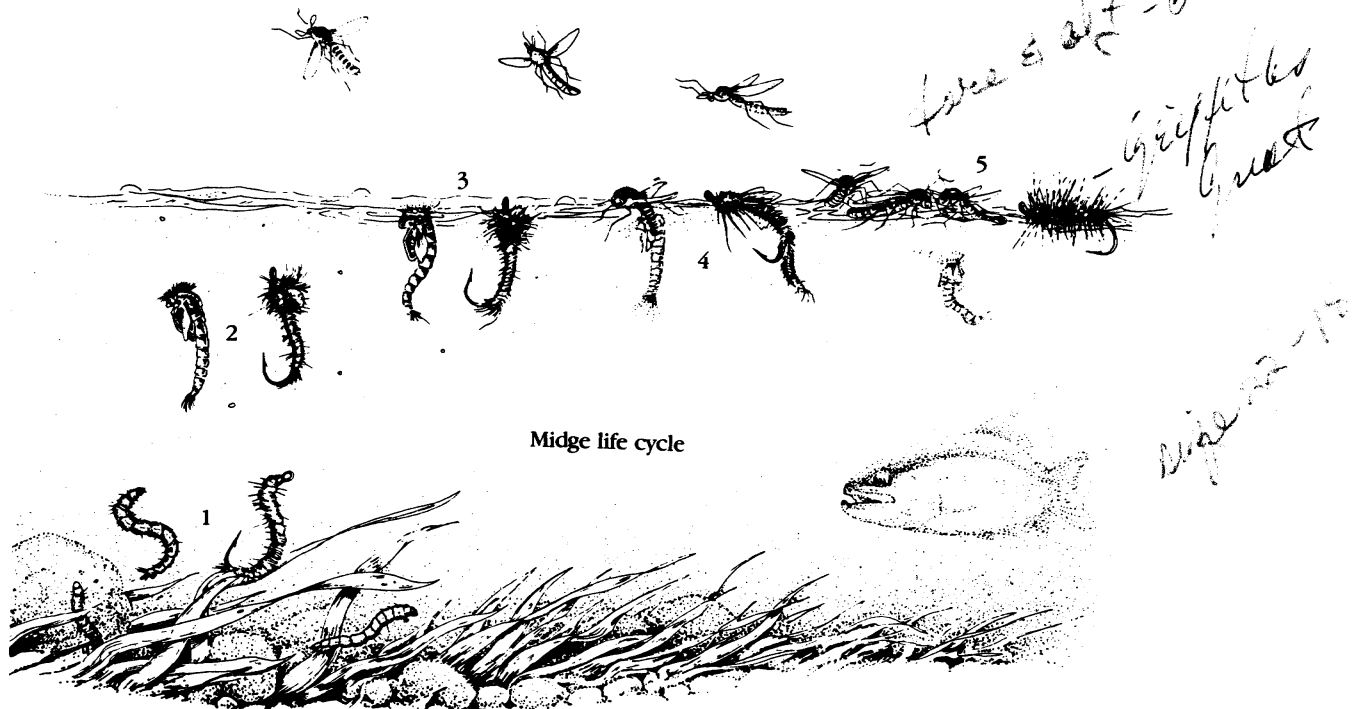
PUPAE

- Head, thorax and wings closely clumped together
- No tails
- Gill fibers may be present at top of thorax
- Pupal colors same as larvae

ADULTS

- Males have fuzzy like antennae
- Slender body and wings
- Non-biting mouth parts
- Size range 1-10mm

Midges are the only insects that provide year round food for Trout. They are the smallest and sometimes most difficult to imitate in the water. Midge hatches can be found in most every fresh-water environment.



PLECOPTERA "STONEFLIES" INCOMPLETE METAMORPHOSIS

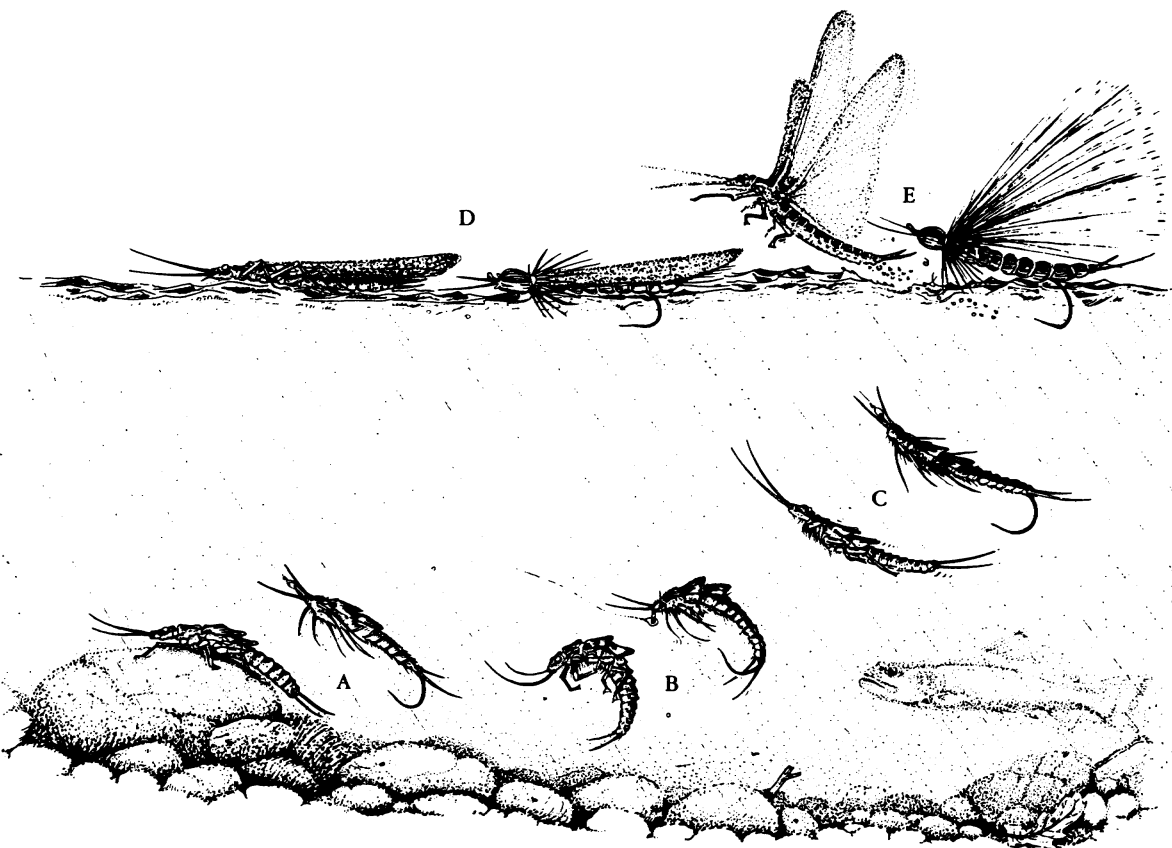
NYMPHS

- Two heavy tails
- Two antennae
- Two claws at the end of each leg
- Gills usually absent; when found appear on thorax
- Two wing pads

ADULTS

- Two tails; may be short or long – usually segmented
- Long stout antennae
- Four wings of equal length; held flat over the abdomen when at rest.
- Wings usually longer than abdomen

Stoneflies are also known as "Salmon Flies". Because of their primitive gill structure they require highly oxygenated waters, usually cool and fast flowing. There is no larvae stage. The nymph crawls to the surface via rock or twig rather than the emergence through the water surface as the Caddis and Mayflies. The Stonefly lifecycle varies from 1-3 years.



Small. Rivers
half back - on bottom
stimulation
area pillars
high cold water
fast water
flies with long
antennae

TRICHOPTERA "CADDISFLIES"

COMPLETE METAMORPHOSIS

LARVAE

- Small antennae no tail
- Gills when present on abdomen
- No wing pads on thorax
- Some are case builders others free living

The most common containment for Caddis larvae in our area are the following

- Pebble case
- Cased caddis
- Net spinners
- Free living

PUPAE

- Antennae long-body length
- Wing pads well developed tucked under abdomen
- No tails or anal hooks
- Contained in mineral or plant case

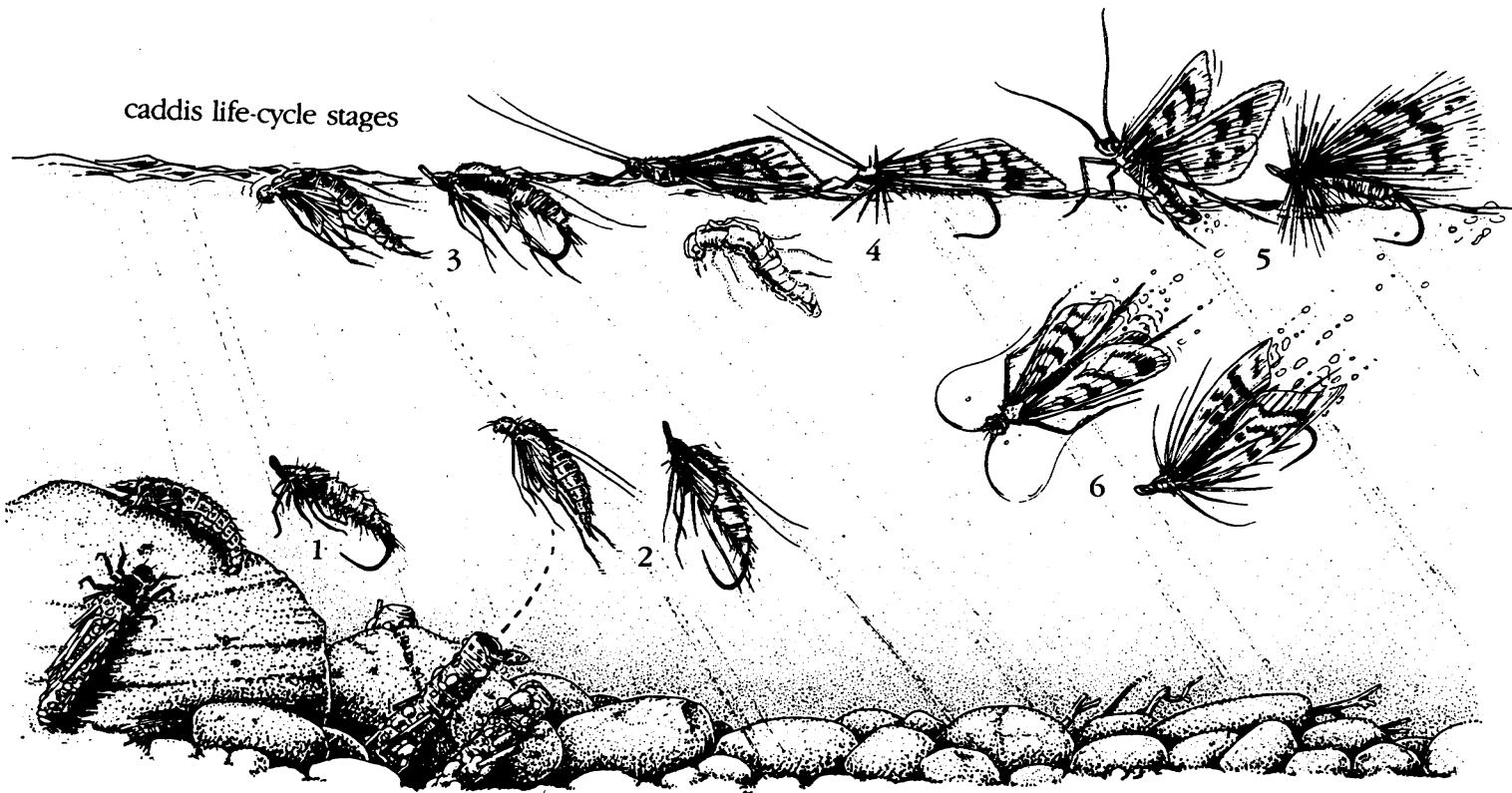
ADULT

- Four well developed wings- held back in a tent like fashion when still
- No tails
- Long antennae-length of body or longer

Caddis produce the most prolific hatches on the Eagle and Colorado rivers. They prefer cool flowing water but have been found to adapt to warmer temperatures and slow moving water.

fast water

caddis life-cycle stages



Elk Hair Caddis

Hairs on

EPHEMEROPTERA "MAYFLIES" INCOMPLETE METAMORPHOSIS

NYMPH

- Three tails except for two species which have two tails
 - Each leg has single claw on end
 - Platelike gills found on abdomen segments only
 - One wing pad
- Nymphs are usually classified into four major groups
1. Crawlers
 2. Swimmers
 3. Burrowers
 4. Clingers

slower water

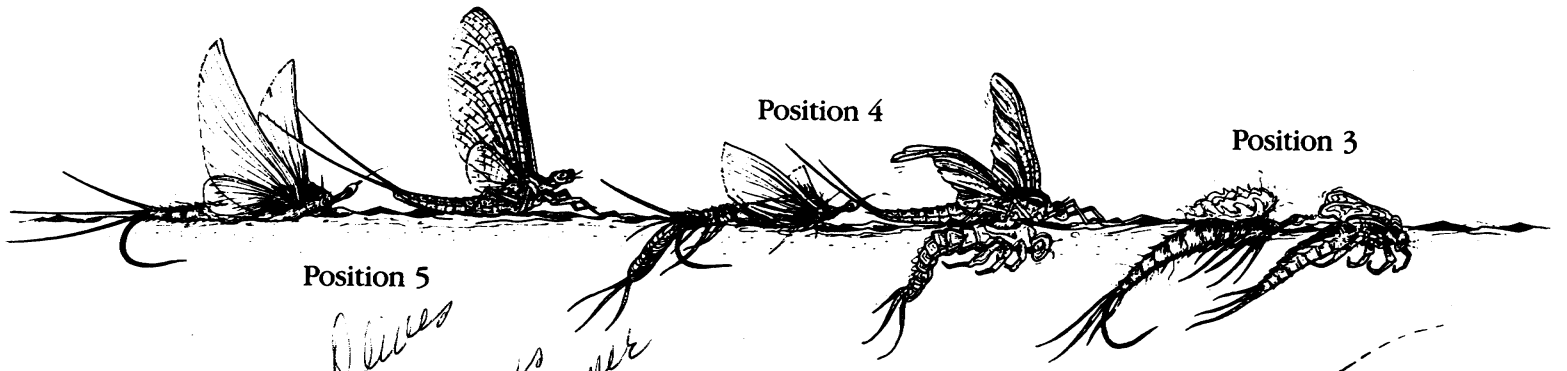
ADULTS (Dun and Spinner stages)

- Two or three long tails
- Wings held up vertically; front pair is large and triangular-hind pair small or absent
- Body is slender and delicate
- Duns identified by gray opaque wings
- Spinners identified by clear somewhat transparent wings

No other insect has two wing stages as the Mayfly. Mayflies are excellent indicators of water quality. They need clean highly oxygenated water to survive. They have not adapted to warmer waters or decreases in water quality such as the Caddis. In the east and some European countries Mayfly hatches are very predictable and some even famous such as the "Hex Hatch".

*Pleasant fields
R522*

*P. Adams
BWO's*



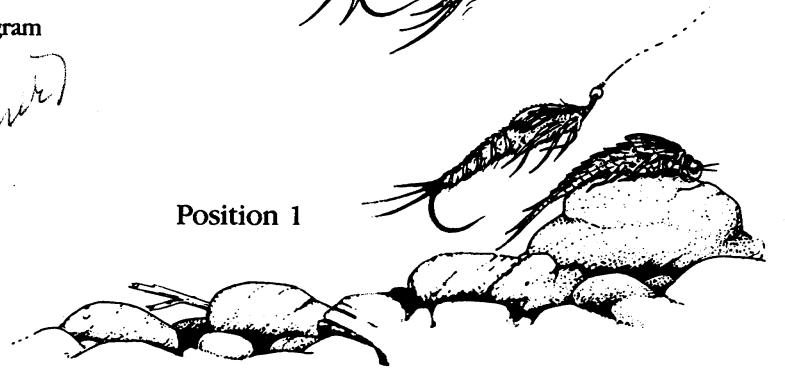
Blue wing Olives
 Spring
 Pale Morning Dew
 Pleasant Tail (mid summer)

Mayfly life cycle and fly diagram

Position 2



Position 1



Large mayflies (mid summer)
 Green Dinkles
 Gray "
 Brown "