A KEY TO AQUATIC INSECTS*
IN STREAMS OF THE SIERRA FOOTHILLS

1a. If the object looks like a shell, a tube or a "house," then .... **go to 2**
1b. If the object looks like an animal (with moving parts like legs, wings or gills), then .... **go to 3**

2a. If an animal is in the "house" and has jointed legs, then it is a .... **Caddisfly larva**
2b. Even if no animal can be seen inside the "house," then it may be a .... **Caddisfly larval case**

3a. If the animal has tails at the end of its body, then .... **go to 4**
3b. If the animal has no tails then .... **go to 9**

4a. If it has two tails, then .... **go to 5**
4b. If it has three tails, then .... **go to 8**

5a. If it has no wings, then .... **go to 6**
5b. If it has wings, then .... **go to 7**

6a. If it has flat shaped gills on each side of most abdominal segments, then it is a ..... **Mayfly nymph**
6b. If it has no gills or only threadlike gills on a few abdominal segments, then it is a **Stonefly nymph**

7a. If it has 1 or 2 pair of upright wings like little sails, then it is a .... **Mayfly adult**
7b. If it has 4 long wings lying flat over its body, then it is a .... **Stonefly adult**

8a. If it has no wings, then it is a .... **Mayfly nymph**
8b. If it has 1 or 2 pair of upright wings like little sails, then it is a .... **Mayfly adult**

9a. If it has three pairs of jointed legs, then .... **go to 10**
9b. If it has no jointed legs but zero to several pairs of not jointed appendages, then .... **go to 15**

10a. If it has wings, then .... **go to 11**
10b. If it has no wings, then .... **go to 12**

11a. If it has wings sticking straight out (perpendicular) from its body, then .... **go to 13**
11b. If it has wings held back over its body, then .... **go to 14**

12a. If it has a pair of small hooks on the end of its abdomen, and with or without numerous hair-like
     gills on its abdomen, then it is a .... **Caddisfly larva**
12b. If it has 3 paddle-like gills at end of its body, then it is a .... **Damselfly nymph**
12c. If it has no hooks on the end of its abdomen and no visible gills, then it is a ..... **Dragonfly nymph**

13a. If it has only 2 wings straight out from body, then .... **go to 17**
13b. If it has 4 wings straight out from body, then it is a .... **Dragonfly adult**

14a. If it has speckled wings folded in a tent-shape ∧ over its body, then it is a .... **Caddisfly adult**
14b. If it has long, clear wings on edge over a very long, thin body, then it is a .... **Damselfly adult**
14c. If it has semi-hard wing covers that hide its wings, then it is a ..**Water Boatman or Backswimmer**

14d. If it has completely hard and shinny wing covers that hide its wings, then it is a.……………**Beetle**

15a. If it has no legs, then .... **go to 16**
15b. If it has only 2 short pro-legs, then it is a .... **Midgefly larva**
15c. If it has more than two pro-legs, then it is a .... **Cranefly larva**

16a. If it has a body shaped like an alevin, then it is a .... **Mosquito pupa**

16b. If it has a breathing tube at end of its abdomen, then it is a .... **Mosquito larva**

16c. If it has no breathing tube at end of its abdomen, and is shaped like a long cylinder often with one end swollen and rounded, it is a .... **Cranefly larva**

17a. If it is a small insect (less than ¼ inch long), without a long, tube-like proboscis, with or without long hairy antennae, then it is a .... **Midgefly adult**

17b. If it has a long, tube-like proboscis, then it is a .... **Mosquito adult**

18.　 If it is a medium to large insect (greater than ¼ inch long) without a tube-like proboscis, and smooth, straight antennae then it is a .... **Cranefly adult**

* Note: This key is for insects only. Other aquatic invertebrates such as snails, amphipods, isopods, etc. will not key out correctly with this key.