

Table S1. Taxonomic key to species of Chironomidae larvae in large South Korean rivers.

1. Head capsule oval, elongated. Eye spots single, round or kidney-shaped. Ligula strongly and distinctively dentate(Tanypodinae) ***Procladius choreus***
- 1' Head short. Eye spots more than 2. Ligula not dentate 2
- 2(1') Eye spots 2, different in size, arranged horizontally. Some species with 1 eye-spot, shaped like a comma. Mentum with smaller, irregular-shaped ventromental plate.....(Orthocladiinae) 3
- 2' Eye-spots 2 or 3, similar in size, arranged vertically. Mentum with well developed rectangular- or fan-shaped ventromental plate..... (Chironominae) 4
- 3(2) Antennae 4-segmented. Mentum with bumpy, irregular median tooth..... ***Prosilocerus akamusi***
- 3' Antennae 6-segmented. Mentum with 2 pairs of median teeth and 6 pairs of lateral teeth
..... ***Hydrobaenus kondoi***
- 4(2') Antennae 5-segmented, with characteristic lauterbone organ. Ventromental plates broad.....
..... (Tanytarsini) 5
- 4' Antennae 5–8-segmented, with sometimes small or indistinct lauterbone organ. Ventromental plates fan-shaped and well separated.....(Chironomini) 6
- 5(4) Antennal lauterbon organ divided, more than 5x length of antennal segments 3–5 combined.....
..... ***Tanytarsus kiseogi***
- 5' Antennal lauterbon organ not divided, simple, as long as antennal segments 3–5 combined.....
..... ***Tanytarsus ahyoni***
- 6(4') Abdominal segment VII with lateral tubules; segment VIII with 2 pairs of ventral tubules 7

6'	Abdominal segment VII without lateral tubules; segment VIII with 1–2 pairs of ventral tubules	8
7(6)	Mentum lateral teeth irregularly arranged	<i>Chironomus circumdatus</i>
7'	Mentum lateral teeth regularly arranged	<i>Chironomus nipponensis, Chironomus plumosus</i>
8(6')	Abdominal segment VIII with 1 pair of ventral tubules.....	9
8'	Abdominal segment VIII with 2 pair of ventral tubules.....	10
9(8)	Mentum median tooth whole, not dentate; 4th lateral teeth smaller than 5th lateral teeth.....	
	<i>Benthila carbonaria</i>
9'	Mentum median tooth with 4 small teeth; 4th lateral teeth same in size as 3rd or 5th lateral teeth	
	<i>Lipiniella moderata</i>
10(8')	Mentum with 1 median tooth.....	11
10'	Mentum with more than 2 median teeth.....	12
11(10)	Median tooth somewhat depressed, lower than 1st lateral teeth	<i>Glyptotendipes tokunagai</i>
11'	Median tooth normal, as high as 1st lateral teeth	<i>Dicrotendipes nervous</i>
12(10')	Mentum median tooth double-forked; 1st lateral teeth smaller than 2nd lateral teeth	
	<i>Polypedilum yonsanensis</i>
12'	Mentum median tooth triple-forked; 1st lateral teeth similar in size to 2nd lateral teeth	
	<i>Microchironomus tener</i>