

Supplementary material

Cladistic analysis of the family Nomoclastidae with descriptions of a new genus and eight new species (Opiliones, Laniatores)

Ricardo Pinto-da-Rocha^{A,C} and *Cibele Bragagnolo*^B

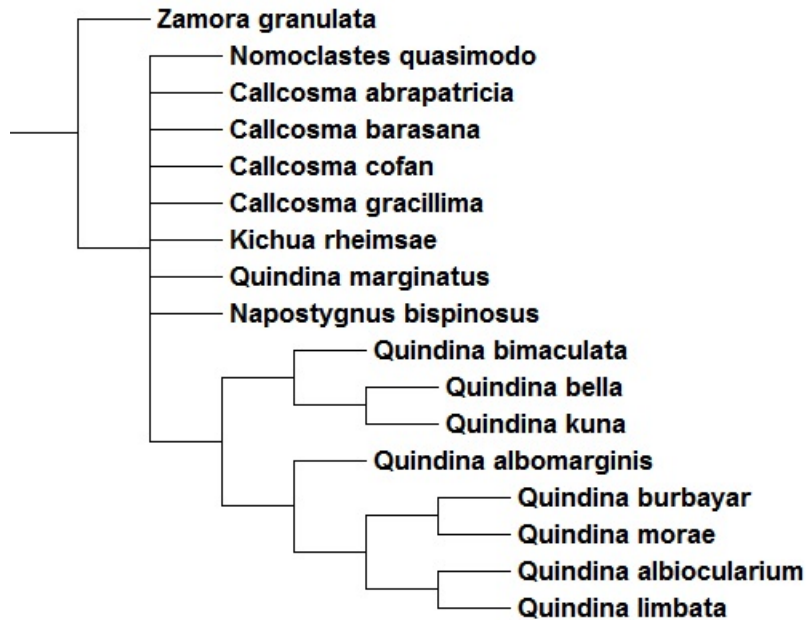
^ADepartamento de Zoologia, Instituto de Biociências, Universidade de São Paulo, Caixa Postal: 11.461, 05422-970, São Paulo, SP, Brazil.

^BInstituto de Ciências Ambientais, Químicas e Farmacêuticas, Universidade Federal de São Paulo, Rua Prof. Arthur Riedel n° 275, 09972-270, Diadema, SP, Brazil.

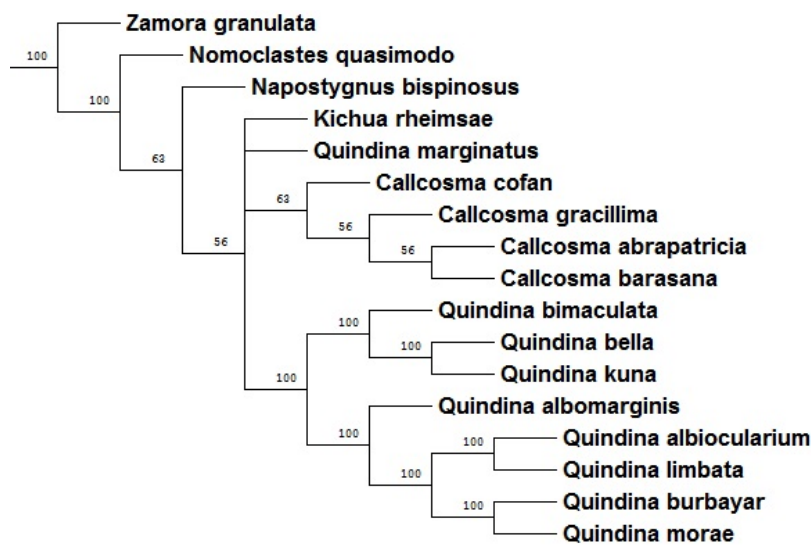
^CCorresponding author. Email: ricrocha@usp.br

Fig. S1. Cladistic hypothesis for Nomoclastinae based on equal weighting (strict consensus of 125 trees), consensus of majority (>50%), successive weighting on retention index, three different concavities (K=1, 2, and 3). Outgroups excluded.

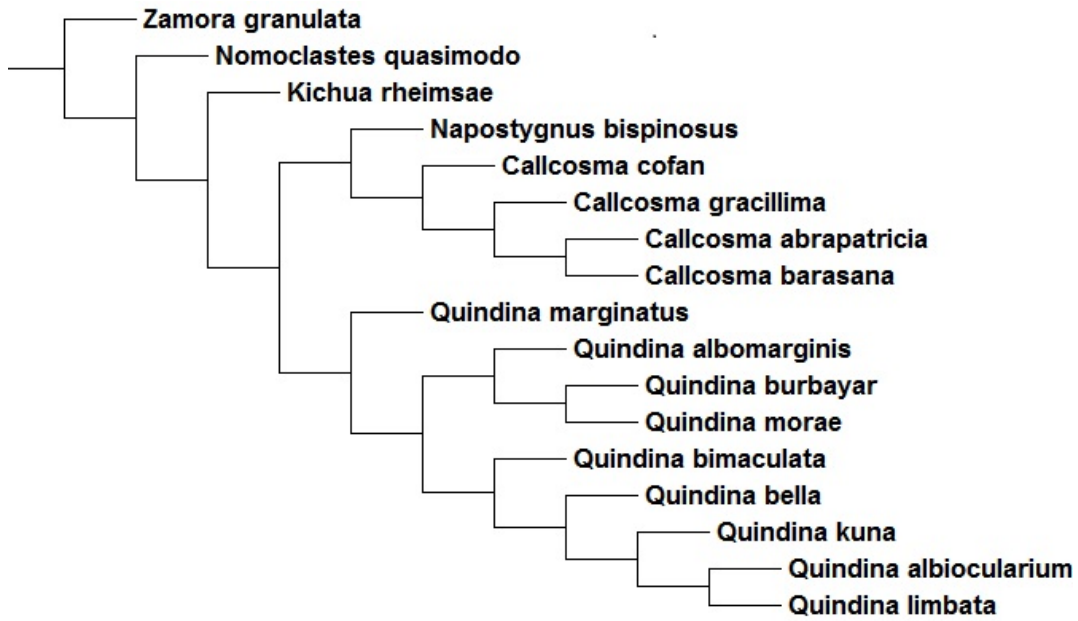
Equal weighting



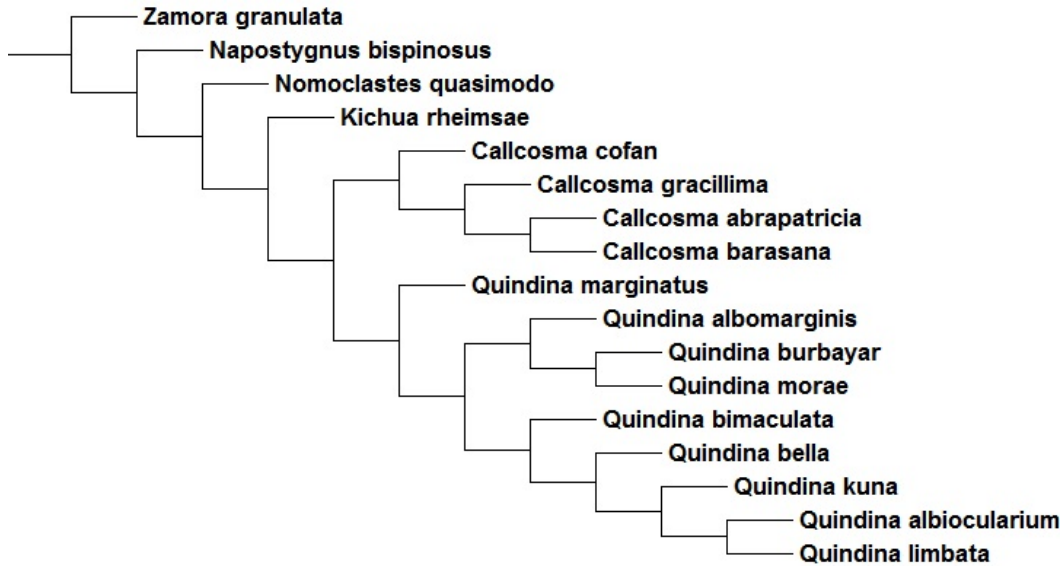
Majority Consensus (>50%)



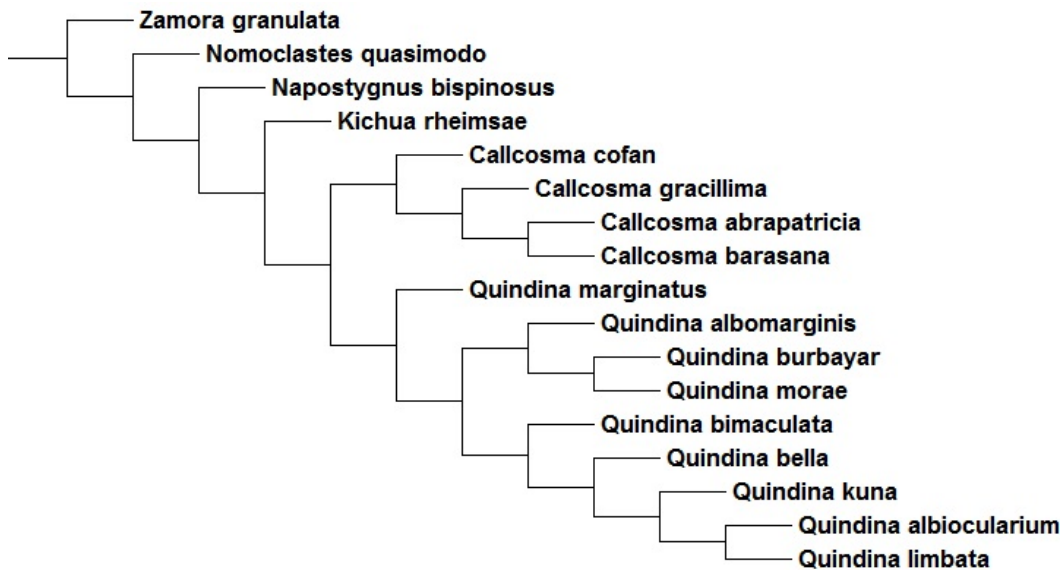
Concavity K=1 tree



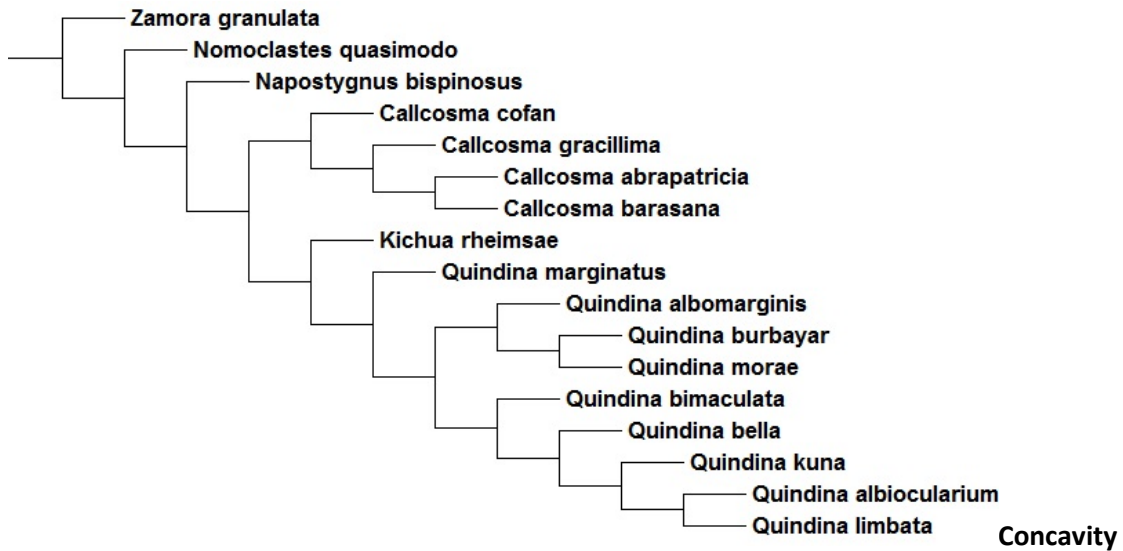
Concavity K=3, tree # 1, Successive weighting tree #3



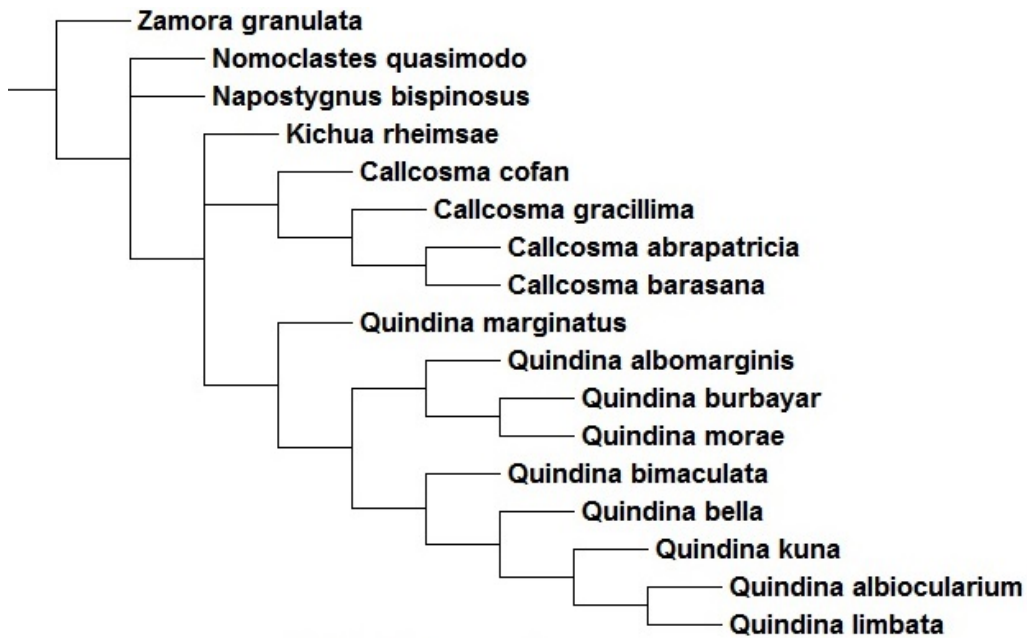
Concavity K=3, tree #2



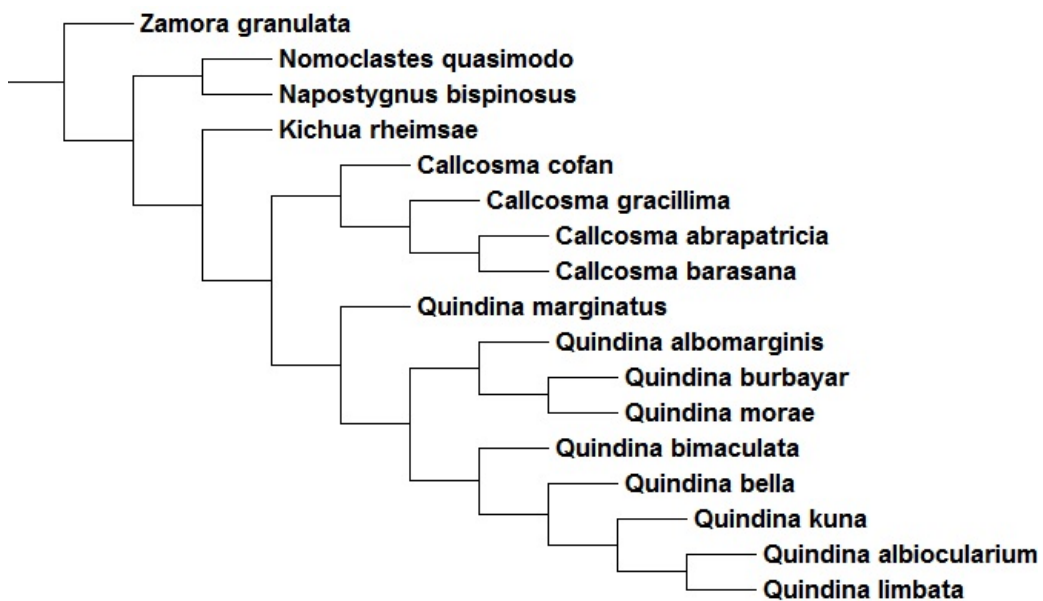
Concavity K=3, tree #3



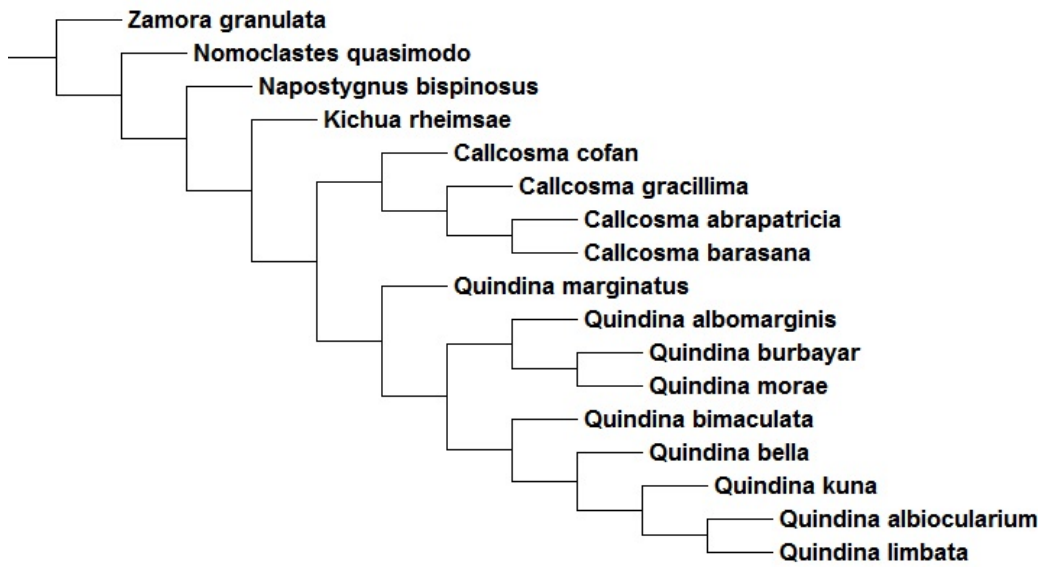
K=3 and K=6 strict consensus trees; successive weighting strict consensus tree



Concavity K=6, tree 1



Concavity K=6, tree 2; Successive weighting tree #2



Concavity K=6, tree 3; Successive weighting tree #1

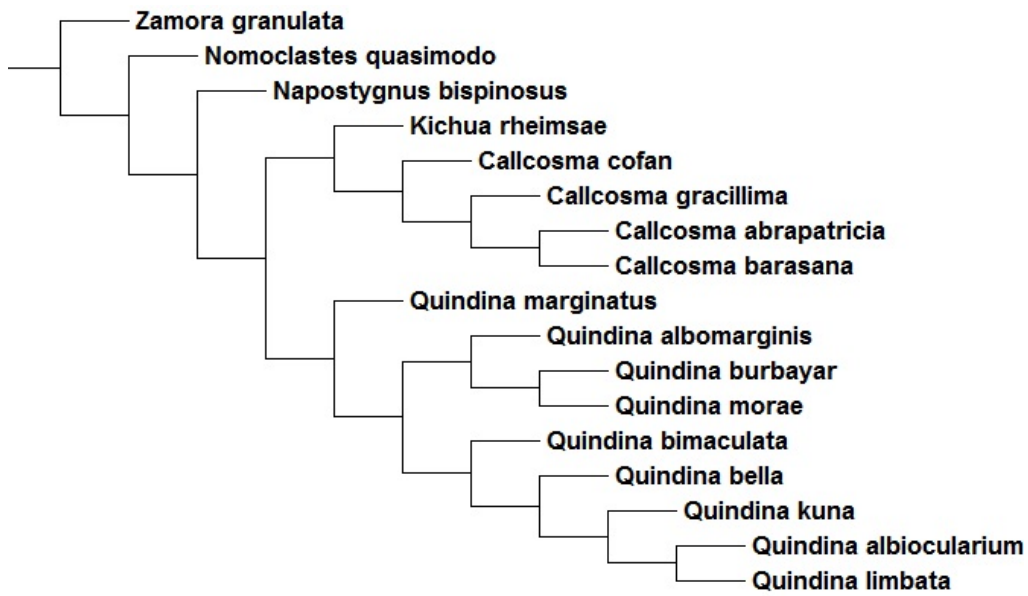


Table S1. Sexual dimorphism in 60 Gonyleptoidea species

L/W, ratio of length and width of the stigmatic area

Family	Species	L/W	
		Male	Female
Cosmetidae	<i>Acromares banksi</i>	4.6	3.5
Cosmetidae	<i>Acromares brasiliensis</i>	4.5	3.0
Cosmetidae	<i>Cosmetus variolosus</i>	2.5	2.0
Cosmetidae	<i>Cynorta conspersa</i>	3.3	2.2
Cosmetidae	<i>Cynorta discreta</i>	3.2	1.5
Cosmetidae	<i>Cynorta valida</i>	2.4	1.4
Cosmetidae	<i>Eucynortulla ypsilon</i>	3.1	2.4
Cosmetidae	<i>Eupocilaema panamensis</i>	2.3	1.8
Cosmetidae	<i>Eupoecilaema perducens</i>	4.4	2.4
Cosmetidae	<i>Flirtea phalerata</i>	2.6	1.5
Cosmetidae	<i>Gryne dimorpha</i>	3.9	2.3
Cosmetidae	Cosmetidae indet.	2.0	2.0
Gonyleptidae	<i>Acanthopachylus aculeatus</i>	6.3	3.5
Gonyleptidae	<i>Ampycus telifer</i>	5.3	3.5
Gonyleptidae	<i>Cadeadoius niger</i>	4.9	3.5
Gonyleptidae	<i>Glysterus metatarsalis</i>	6.3	3.1
Gonyleptidae	<i>Goniosoma venustum</i>	4.8	2.1
Gonyleptidae	<i>Gonyleptes horridus</i>	4.9	3.3
Gonyleptidae	<i>Hernandaria armatifrons</i>	2.7	1.7
Gonyleptidae	<i>Li-Cornus tama</i>	7.2	4.3
Gonyleptidae	<i>Promitobates ornatus</i>	2.3	2.3
Gonyleptidae	<i>Pseudopucroliia discrepans</i>	5.3	2.6
Gonyleptidae	<i>Metarthrodes xanthopygus</i>	4.1	2.3
Gonyleptidae	<i>Sodreana sodreana</i>	4.8	2.9
Manaosbiidae	<i>Azulanus scabrissimus</i>	2.0	1.7
Manaosbiidae	<i>Barrona williamsi</i>	3.5	2.2
Manaosbiidae	<i>Narcellus montgomeryi</i>	2.6	2.1
Manaosbiidae	<i>Poecilocranaus graciosus</i>	2.7	1.8
Manaosbiidae	<i>Rhopalocranaus apiculatus</i>	3.5	2.0
Manaosbiidae	<i>Rhopalocranaus bordoni</i>	3.8	2.3
Manaosbiidae	<i>Rhopalocranaus limbatus</i>	2.2	1.4
Manaosbiidae	<i>Rhopalocranaus scaber</i>	2.5	1.8
Manaosbiidae	<i>Rhopalocranaus albilineatus</i>	2.4	2.0
Manaosbiidae	<i>Saramacia annulata</i>	2.4	2.2
Manaosbiidae	<i>Saramacia lucasae</i>	3.1	2.1
Manaosbiidae	<i>Syncranaus cribrum</i>	2.8	2.0
Nomoclastidae	<i>Callcosma abrapatricia</i>	2.8	2.2
Nomoclastidae	<i>Callcosma barasana</i>	3.1	1.6
Nomoclastidae	<i>Callcosma cofan</i>	3.0	1.9
Nomoclastidae	<i>Callcosma gracillima</i>	2.8	2.0
Nomoclastidae	<i>Kichua rheimsae</i>	2.3	1.9
Nomoclastidae	<i>Quindina albiocularium</i>	3.0	2.0
Nomoclastidae	<i>Quindina albomarginis</i>	2.5	1.8
Nomoclastidae	<i>Quindina burbayar</i>	3.2	2.0

Nomoclastidae	<i>Quindina limbata</i>	3.1	1.9
Nomoclastidae	<i>Quindina morae</i>	2.7	2.0
Nomoclastidae	<i>Quindinas kuna</i>	2.6	1.9
Nomoclastidae	<i>Napostygnus bispinosus</i>	2.8	2.2
Stygnidae	<i>Innoxius magnus</i>	2.5	2.1
Stygnidae	<i>Pickeliana pickeli</i>	2.0	1.1
Stygnidae	<i>Pickeliana capito</i>	2.2	1.5
Stygnidae	<i>Protimesius albolineatus</i>	1.4	1.2
Stygnidae	<i>Protimesius apiacas</i>	1.7	1.2
Stygnidae	<i>Protimesius longipalpis</i>	1.2	1.3
Stygnidae	<i>Protimesius mendopticus</i>	1.4	1.2
Stygnidae	<i>Stygnoplus clavotibialis</i>	2.9	1.6
Stygnidae	<i>Stygnus polyacanthus</i>	2.9	1.6
Stygnidae	<i>Stygnus pectinipes</i>	2.3	1.8
Stygnidae	<i>Verrucastygnus caliginosus</i>	2.0	1.2
Stygnidae	Stygnidae Indet.	1.5	1.1