



PNAMP provides a forum to enhance the capacity of multiple entities to collaborate to produce an effective and comprehensive network of aquatic monitoring programs in the Pacific Northwest based on sound science designed to inform public policy and resource management decisions.







BLM



BPA



CDFW



Colville Tribes



CRITFC



EPA



IDFG



NOAA



NWIFC





OWEB



PSMFC



USBR



USFS



USGS



WDFW



WA ECY



WA GSRO



WA RCO



20 Signatory
Partners form the steering committee

4 full-time staff

Everyone is welcome to participate



pacific northwest aquatic monitoring partnership

www.pnamp.org

Projects

HOME ABOUT EVENTS GET INVOLVED TOPICS PROJECTS TOOLKIT

ONGOING PROJECTS

- Columbia River Basin Population Crosswalk Geodatabase and Online Interactive Mapping Application
- Coordinated Assessments for Salmon and Steelhead
- Data Management Leadership Team
- Data Steward Community of Practice
- Effectiveness Monitoring Coordination & Assessment
- Habitat Data Sharing
- Integrated Status and Trends Monitoring (ISTM) Demonstration Project
- Intensively Monitored Watersheds (IMWs) Project
- ISTM Fish Monitoring Component
- ISTM Habitat Monitoring Component
- ISTM Master Sample Component
- Metadata Builder
- Methods Review
- Monitoring Methods Project
- Monitoring Sample Designer (GRTS design support)
- Monitoring Site Manager
- MonitorinaResources.ora
- Northwest Standard Taxonomic Effort
- Regional Metadata Guidance Project
- Remote Sensing Forum
- Salmon Monitoring Advisor

Upcoming Events | Past PNAMP Events

- Habitat Status and Trends Monitoring in the LCR Stormwater Workshop (Feb 04, 2013)
- Annual Stream Restoration Symposium (Feb 05, 2013 Feb 07.
- Using Acoustic Tags to Track Fish (Feb 07, 2013 Feb 08, 2013).
- Annual Eastern Washington / North Idano Regional Lakes Conference (Feb 09, 2013)

See more exents.

PNAMP Tools



Monitoring Methods

Visit MonitoringMethods org to document methods and protocols, to find others' content, or to discuss a topic on the Community Forum. This tool is intended to support documentation and to promote information. exchange and obliaboration between regional monitoring practitioners.



Salmon Monitoring Advisor

Visit SalmonMonitoringAdvisor.org to find advice and step-by-step guidelines designed to help practitioners design, implement, and analyze results from monitoring programs. Now hosted by PNAW/P

In 2012, PNAMP will faunch a new central location with access to these and other new resources. Check back here for updates

Find out about ongoing and completed PNAMP

W Stremonds / life noti gov

123456

About PNAMP

PNAMP is a forum for the community of aquatic monitoring practitions PNAMP consists of federal, tribal, and state partners; other interested coordinating staff.

- . Find out who we are and what we do.
- . Learn how to get involved, and
- · Access events and documents related to monitoring.

Announcements

- Sediment Symposium: Quantifying in-Stream Sediment and Blotic Responses
- RFQQ: Status and Trends Monitoring For Watershed Health and Salmon Recovery In Washington State for the Period 2013-2016
- Nominations are open for WA-BC AFS Rinarian Habital Award
- Opportunity to Provide Feedback on OWEB's Long-Term Investment Strategy for Conservation
- StreamNet Newsletter: Issue #14
- . Deadline to Apply for the DRAFS Scholarships is Dec 31st

See more announcements



Featured Partner Projects

Status of the Resources Project



Don't see your project listed? Contact Jacque Schel to have it added.

Awards and Update Published January

- Puget Sound Stream January 2013
- Published January Oregon Chapter A Published: January

See all "What We're Re

Share what you are rea Send us suggestions ()

Northwest Standard Taxonomic Effort (NWSTE)





To improve macroinvertebrate data sharing across the Pacific Northwest



Standardized taxonomic nomenclature and resolution to use when identifying macroinvertebrates



2012 NBAW

The monitoring agency perspective (Jo Wilhelm, King Co. WA)

The taxonomic labs perspective (Sean Sullivan, Rhithron)

Lessons learned from SAFIT (Joe Slusark, Brady Richards)

Integration with national efforts (Scott Grotheer, National WQ Lab/USGS)



Included/excluded organisms

- STE provides guidance on what taxa to include or exclude from benthic data sets.
- Terrestrial invertebrates, water surface taxa, eggs, empty shells or cases are excluded entirely, or can be incorporated as incidental records not for metric calculations.



PNAMP STE Levels

STE1: The coarsest taxonomic level – intended for rapid assessments and citizen or school group monitoring projects.

STE2: The lowest practical (and cost effective) level - this is the target level for harmonizing benthic biomonitoring data sets across the region for comparison.

STE3: The finest taxonomic level - intended for project specific objectives and faunistic inventory.



PNAMP STE 2 compared to the SAFIT STE 2

- General agreement on widespread, common, insect taxa
- Coarser level for some groups where return on investment is low, e.g. Acari (mites)
- Finer level for some groups where ROI is high,
 e.g. *Epeorus* species and groups



PNAMP Accepts

Widely recognized species groups

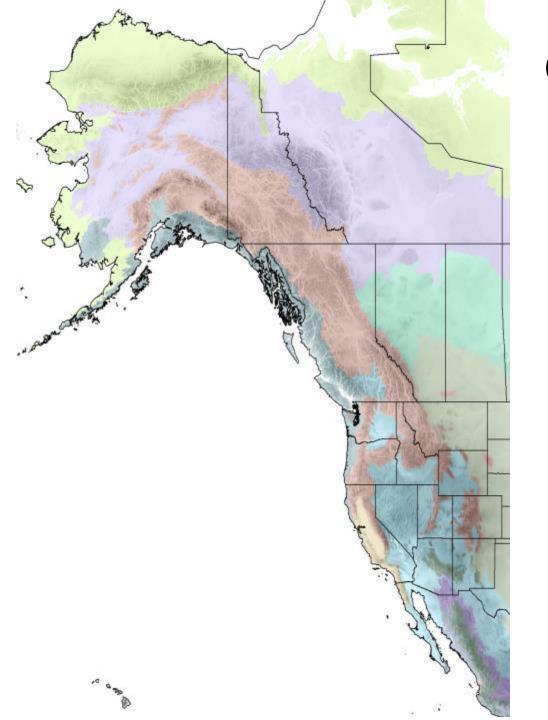
e.g. Epeorus grandis group

Provisional taxa

e.g. Clinocerinae unknown genus A

Slash taxa

e.g. Chelifera/Metachela



Geographic Extent of STE

ID, OR, WA & MT west of the continental divide

Lists will eventually include all western North American taxa



Habitats covered

- STE addresses primarily benthic biomonitoring samples from streams and rivers.
- Other sample types may be addressed at a later date,
 e.g. drift, fish diet, qualitative multi-habitat samples.



Habitats not initially covered

- Lentic: lakes, ponds, wetlands, etc.
- Springs
- Other freshwater habitats

STE guidance on some of these habitat types may be added at a later date.

NWSTE Format

2 A	5	С	D			G H		3	К	L	М	N	0	
Pacific Northwest Standa	Jard Taxonomic Effort /	(STE) for F	Freshwater Macroin	vertebrate !	ident	fication	4							
See PNAMP STE 2013 versio	on dock for introduction, col	Jumn explan	rations and citations for V	dentification I?	deratur	.0.								
3 Sponsered by the Pacific Nort	uthwest Aquatic Monitoring	Partnership	(PNAMP), http://www.pr	//amp.org										
4 Trichoptera editor: Robert Wis	isseman, Aquatic Biology A	associates, F	inc., Corvallis, OR, bobil?	aguatichio.co	JMI.									
5 August 2013 version														
6 Status column														
7 valid= name to be used in	in data sets, also highlighted i	in bold in \$"	nal identification column											
s synonym= older names th	that are in more recent literati	¿ure or data	sets that should be char	aged to the var	alid nam	40.								
9 monotypic= single knowr	n species in genus world-wide	de, in which	case the species name?	is used.										
single NA= single species	as in genus known from North	n America, 1	in which case the specie	a name is usr	ed.									
	cies in genus known from we	estern North	America, in which case	the species r	aame ir	s used.								
	cies in genus known in the Pa													
	nconfirmed record for taxon re				10.00									
	at have been used in past dat													
S PNAMP STE Levels 1-3 colu			and delined and											
	d level of taxonomic resolution	an.												
	used when damaged/immatur		o of specimens prevents	preferred level	(from !	oeing ach	rieved with reason	nable certainty.						
18	And miles assistance		or apartment provides p		78000	/	7144	aute Committee						
19				P	NAME	PNAN PNA	4AMP							
10								on Number of North	4		Taxonom'	ic Hierarchy	du	
21 Final identification	Taxonomic authority	ITIS TSN	N Common name	_			3 Literature			Comments		Subphylun		St
23 Trichoptera	Taxonian dama						3/1 Wagins 1996			201111121112		a Hexapoda		
24 Apataniidae	Wallengren, 1886						0/1 Wiggins 1996			identify to genus, or species for genera monotypic in western North America whenever possible				
5 Allomyla	Banks, 1916						es Wiggins 1996			primarily subalpine and alpine springs and seeps; larvae cannot be identified to species		a Hexapoda		
	Martynov, 1935				yes y	102 10	4 mggms ison	/ 10		primarily subalpine and alpine springs and seeps; larvae cannot be identified to species synonym of Allomyia		a Hexapoda a Hexapoda		
26 (mania 27 Allomvia acanthis	(Ross, 1950)		portable-case makers portable-case makers				4			syllonym or Allomyla subalpine & alpine small streams and springs in the Cascades		a Hexapoda a Hexapoda		
27 Allomyia acanthis 28 Allomyia bifosa	(Ross, 1950) (Ross, 1950)						4			mid and northern Rockies and coastal ranges in BC, high elevation, springs and small streams				
29 Allomyia citosa 29 Allomyia cascadis	(Ross, 1950)						4			Cascades & northern Rockies and coastal ranges in EC, nigh elevation, springs and small streams		a Hexapoda a Hexapoda		
30 Allomyia cascadio	(Denning, 1953)						4			Snowy Range Mountains, Albany County, high elevation		a Hexapoda a Hexapoda		
30 Allomyia chama 31 Allomyia cidoipes	(Denning, 1953) (Schmid, 1968)						4					a Hexapoda a Hexapoda		
32 Allomyla clatipes 32 Allomyla gnathos	(Ross, 1950)						4			cascades & coastal ranges, mantime, mid to high elevation, springs and small cold streams southern Rockies		a Hexapoda a Hexapoda		
33 Allomvia hector	(Nimmo, 1971)		portable-case makers				4			northern Rockies, high elevation small streams		a Hexapoda		
34 Allomyla picoides	(Ross, 1950)						4			coastal ranges		a Hexapoda		
35 Allomyla renoa	(Mine, 1935)						4			Reno area in Sierras		a Hexapoda		
36 Allomyla scotti	(Wiggins, 1973)						4			this species has "homs" on the head, but may not be the only species with homs		a Hexapoda		
37 Allomyia thomasi	(Nimmo, 1977)		portable-case makers				4			northern Rockies, high elevation small streams		a Hexapoda		
38 Allomyla tripunctata	(Banks, 1900)						4			Coastal ranges, Rockies and Interior ranges, high elevation		a Hexapoda		
39 Allomyla new species	Erman unpublished		portable-case makers				4			Nevada County, Sagehen Creek basin, Sierras		a Hexapoda		
40 Apatania	Kolenati, 1848			valid y	1405	ups V	es Wiggins 1996			generally higher elevation, cool-cold montane streams		a Hexapoda		
41 Radema	Hagen, 1864					162 . 30	Ross 1947	4		North American species transferred to Apatania		a Hexapoda		
42 Apetania alberta	Nimmo, 1971			a growing			10033 1341			northern Rockies		a Hexapoda		
43 Apatania arizona	Wiggins, 1973									spring streams at higher elevations in AZ		a Hexapoda		
44 Apetania barri	Smith, 1969									northern Rockies		a Hexapoda		
45 Apetania chapica	(Denning, 1954)									northern Rockies, interior ranges OR, doubtful records from CA		a Hexapoda		
es Apetania comosa	(Denning, 1949)									northern Rockies and interior ranges in UT		a Hexapoda		
47 Apatania cnimophila	McLachlan, 1880									northern streams, rivers and lakes		a Hexapoda		
48 Apatania hirtipas	(Curtis, 1835)						4			no other locale information available		a Hexapoda		
49 Apatania shoshone	Banks, 1924						4			widespread in the Rocky Mountains, streams and lakes		a Hexapoda		
50 Apatania sorer	(Ross, 1941)						4			primarily in low to mid elevation maritime PNW streams		a Hexapoda		
51 Apetania stigmatella	(Zetterstedt, 1840)								AK CO? MB ME NF NT ON C			a Hexapoda		
en Anatonia tavala	(Denoina 1967)								OP	mid-bish election cold ferroted streams in the OE Cascades		a Hovanoda		
H + F H Trichoptera 2] 4					

					PNAM	PNAN	PNAY	MP.							
					STE	STE	STE	Identification	n Number of Nort	A CONTRACTOR OF THE CONTRACTOR	1/	axonomir	ic Hierarchy		
inal identification	Taxonomic authority	ITIS TSN	Common name	Status	1	2	3	Literature	American specie	er Distribution	Comments Pt	fiylum	Subphylun	e Class	5
richoptera		115095	caddisfies	valid	D/I	D/I	D1	Wiggins 1996	,				Hexapoda		p
ataniidae	Wallengren, 1895	598182	portable-case makers	valid	Dil	DI	D/I	Wiggins 1996	33		identify to genus, or species for genera monotypic in western North America whenever possible Art	uthropoda"	Hexapoda	Insecta	
omyla	Banks, 1916	116438	portable-case makers	valid	yes	yes	yes	Wiggins 1996	13		primarily subalpine and alpine springs and seeps: lange cannot be identified to species Ar	athropoda '	Hexapoda	Insecta	- 1
Imania	Martynov, 1935	116381	portable-case makers	synonym							synonym of Allomyia Ar	athropoda'	Hexapoda	Insecta	
myla acanthis	(Ross, 1950)	116451	portable-case makers	1				4		OR WA	subalpine & alpine small streams and springs in the Cascades Ar	athropoda'	Hexapoda	Insecta	
nyla bifosa	(Ross, 1950)	116453	portable-case makers	7				4		AB BC MT WY	mid and northern Rockies and coastal ranges in BC, high elevation, springs and small streams Art	athropoda'	Hexapoda	Insecta	
myla cascadis	(Ross, 1960)	116441	portable-case makers	7				4		AB BC MT OR WA		Athropoda 1	Hexapoda	Insecta	
nyia chama	(Denning, 1953)		portable-case makers					4		CO WY			Hexapoda		
ryla cidolpes	(Schmid, 1968)		portable-case makers	1				4		BC CA OR WA	Cascades & coastal ranges; maritime; mid to high elevation; springs and small cold streams. At	athropoda 1	Hexapoda	Insecta	
yla gnathos	(Ross, 1950)		portable-case makers	7				4		COUT		athropoda 1	Hexapoda	Insecta	
nyla hector	(Nimmo, 1971)		portable-case makers	7				4		AB		uthropoda"	Hexapoda	Insecta	
myla picoides	(Ross, 1950)		portable-case makers					4		AK BC WA?			Hexapoda		
nyla renoa	(Mine, 1935)	116449	portable-case makers					4		NV		uthropoda"	Hexapoda	Insecta	
nyla scotti	(Wiggins, 1973)		portable-case makers					4		OR (Mount Hood)			Hexapoda		
nyia thomasi	(Nimmo, 1977)		portable-case makers					4		AB			Hexapoda		
nyla tripunctata	(Banks, 1900)		portable-case makers					4		AB AK BC CO MT WA WY			Hexapoda		
nyla new species	Erman unpublished		portable-case makers					A		CA			Hexapoda		
tania	Kolenati, 1848		portable-case makers			yes			17+				Hexapoda		
ladoma	Hagen, 1864		portable-case makers					Ross 1947					Hexapoda		
fania alberta	Nimmo, 1971		portable-case makers							AB BC ID MT			Hexapoda		
atania arizona	Wiggins, 1973		portable-case makers							AZ			Hexapoda		
afania barri	Smith, 1969		portable-case makers							ID MT			Hexapoda		
iafania chasica	(Denning, 1954)		portable-case makers							CA2 ID MT OR UT			Hexapoda		
safania comosa	(Denning, 1949)	115544	portable-case makers	7						ID MT UT	northern Rockies and Interior ranges in UT Art	athropoda 1	Hexapoda	Insecta	

Excel Spreadsheet Format

Major taxonomic groups on separate spreadsheets for now

SAFIT moving to database USGS uses Biodata database

					PNAM	PHAN	PHAM	AP .								
					STE	STE	STE	Identification	Number of I	North			Yaxonomi	ic Hierarchy		
nal identification	Taxonomic authority	ITIS TSN	Common name	Status	1	2	3	Literature	American sp	ecies	Distribution	Comments	Phylum	Subphylun	e Class	Si
choptera		115095	caddisfies	valid	D4	D/I	D1	Wiggins 1996						s Hexapoda		P
stanlidae	Wallengren, 1896	598182	portable-case makers	valid	Dil	D4	DI	Wiggins 1996	33			identify to genus, or species for genera monotypic in western North America whenever possible.	Arthropoda	Hexapoda	Insecta	5
omyla	Banks, 1916	116438	portable-case makers	valid	yes	yes	yes	Wiggins 1996	13			primarily subalpine and alpine springs and seeps; lanue cannot be identified to species	Arthropoda	: Hexapoda	Insecta	- 5
Imania	Martynov, 1935	116381	portable-case makers	synonym								synonym of Allomyia	Arthropoda	Hexapoda .	Insecta	- 1
myla acanthis	(Ross, 1950)	116451	portable-case makers							OF	R WA	subalpine & alpine small streams and springs in the Cascades	Arthropoda	: Hexapoda	Insecta	1
myla bifosa	(Ross, 1950)	116453	portable-case makers							AE	B BC MT WY	mid and northern Rockies and coastal ranges in BC, high elevation, springs and small streams in	Arthropoda	Hexapoda	Insecta	- 1
myla cascadis	(Ross, 1950)	115441	portable-case makers							All	B BC MT OR WA	Cascades & northern Rockies, high elevation springs and small streams	Arthropoda	: Hexapoda	Insecta	
myla chama	(Denning, 1953)	116443	portable-case makers								D WY	Snowy Range Mountains, Albany County, high elevation	Arthropoda	некароба .	Insecta	- 1
myla cidolpes	(Schmid, 1968)	604634	portable-case makers							00	C CA OR WA	Cascades & coastal ranges; maritime; mid to high elevation; springs and small cold streams	Arthropoda	и Некароба	Insecta	
ryla gnathos	(Ross, 1960)	116445	portable-case makers							CC	O UT	southern Rockies	Athropoda	: Hexapoda	Insecta	
nyla hector	(Nimmo, 1971)	604537	portable-case makers							All	B .	northern Rockies, high elevation small streams	Athropoda	: Hexapoda	Insecta	
nyla picoides	(Ross, 1960)	116447	portable-case makers							All	K BC WA7	coastal ranges	Arthropoda	в Некароба	Insecta	
ryla renoa	(Mine, 1935)	116449	portable case makers							NY			Arthropoda	Hexapoda	Insecta	
nyle scotti	(Wiggins, 1973)	604639	portable-case makers							OF	R (Mount Hood)	this species has "homs" on the head, but may not be the only species with homs	Arthropoda	и Некароба	Insecta	
yia thomasi	@limmo, 1977)	604641	portable-case makers							All	A .	northern Rockies, high elevation small streams	Arthropoda	: Hexapoda	Insecta	
ryla tripunctata	(Banks, 1900)	116439	portable-case makers							All	BAK BC CO MT WA WY	Coastal ranges, Rockies and Interior ranges, high elevation	Athropoda	некароба	Insecta	
nyla new species	Erman unpublished	none	portable-case makers							C	A	Nevada County, Sagehen Creek basin, Sierras	Arthropoda	Hexapoda .	Insecta	
tania	Kolenati, 1848	115935	portable-case makers	valid	yes	yes	788	Wiggins 1996	17+			generally higher elevation, cool-cold montane streams	Arthropoda	Hexapoda	Insecta	
adoma	Hagen, 1864	598478	portable-case makers	synonym				Ross 1947				North American species transferred to Apatania	Arthropoda	Hexapoda .	Insecta	
ania alberta	Nimmo, 1971	604490	portable-case makers							All	B BC ID MT	northern Rockies	Arthropoda	Hexapoda .	Insecta	
enia arizona	Wiggins, 1973	115942	portable-case makers							AZ	t .	spring streams at higher elevations in AZ	Arthropoda	» Некароба	Insecta	
ania barri	Smith, 1969	604495	portable-case makers							ID	MT		Arthropoda	а Некароба	Insecta	
lania chasica	(Denning, 1954)	604503	portable-case makers								A7 ID MT OR UT			Hexapoda		
	(Denning, 1949)	115544	portable-case makers							10	MTUT	northern Rockies and interior ranges in UT	Arthropoda	Havanoda	broarts	

Columns A-D

- A. Final identification: current scientific name spelled correctly
- B. Taxonomic authority: author and year of published description
- **C. ITIS TSN**: Integrated Taxonomic Information System Taxonomic Serial Number
- D. Common name

					PNAM	PNAM	PNAM	D.								
					STE	STE	STE	Identification	Number of N	Sorth			faxonomi	ic Hierarchy	y	
inal identification	Taxonomic authority	ITIS TSN	Common name	Status	1	2	3	Literature	American sp	ecies	Distribution		Phylum	Subphylur	r Class	Su
richoptera		115095	caddisfies	valid	D/I	D/I	D1	Wiggins 1996				the occassional specimen that can't be identified to family should be entered as Trichoptera	Arthropoda	Hexapoda	Insecta	Ptr
pataniidae	Wallengren, 1895	598182	portable-case makers	valid	Dil	D/1	D/I	Wiggins 1996	33			identify to genus, or species for genera monotypic in western North America whenever possible.	Arthropoda	Hexapoda	Insecta	Ph
Nomyla	Banks, 1916	116438	portable-case makers	valid	yes	yes	yes	Wiggins 1996	13			primarily subalpine and alpine springs and seeps; lange cannot be identified to species	Arthropoda	Hexapoda	Insecta	Pti
Imania	Martynov, 1935	116381	portable-case makers	synonym								synonym of Allomyia	Arthropoda	Hexapoda	Insecta	Phi
Nomyla apanthis	(Ross, 1950)	116451	portable-case makers							OR	WA	subalpine & alpine small streams and springs in the Cascades	Arthropoda	Hexapoda	Insecta	Pto
Nomyla bifosa	(Ross, 1950)	116453	portable-case makers							AB	BC MT WY	mid and northern Rockies and coastal ranges in BC, high elevation, springs and small streams	Arthropoda	Hexapoda	Insecta	Phi
fomyla cascadis	(Ross, 1960)	116441	portable-case makers							AB	BC MT OR WA	Cascades & northern Rockies, high elevation springs and small streams	Arthropoda	Hexapoda	Insecta	Ptr
Nomyia chama	(Denning, 1963)	116443	portable-case makers							CO	WY	Snowy Range Mountains, Albany County, high elevation	Athropoda	Нехароба	Insecta	Ptr
lomyla cidolpes	(Schmid, 1968)	604634	portable-case makers							BC	CA OR WA	Cascades & coastal ranges; maritime; mid to high elevation; springs and small cold streams	Arthropoda	Hexapoda	Insecta	Ph
formyla gnathos	(Ross, 1960)	116445	portable-case makers							CO	UT	southern Rockies	Arthropoda	Hexapoda	Insecta	Phi
flomyla hector	(Nimmo, 1971)	604637	portable-case makers							AB		northern Rockies, high elevation small streams	Athropoda	Hexapoda	Insecta	Ph
Tomyla picoides	(Ross, 1960)	115447	portable-case makers							AK	BC WA?	coastal ranges	Athropoda	Hexapoda	Insecta	Phi
fomyla renoa	(Mine, 1935)	116449	portable-case makers							NV			Arthropoda	Hexapoda	Insecta	Phi
flomyla scotti	(Wiggins, 1973)	604639	portable-case makers							OR	(Mount Hood)	this species has "homs" on the head, but may not be the only species with homs	Arthropoda	Hexapoda	Insecta	Phi
flomyla thomasi	(Nimmo, 1977)	604641	portable-case makers							AB		northern Rockies, high elevation small streams	Arthropoda	Hexapoda	Insecta	Pto
fornyla tripunctata	(Banks, 1900)	116439	portable-case makers							AB	AK BC CO MT WA WY	Coastal ranges, Rockies and Interior ranges, high elevation	Arthropoda	Hexapoda	Insecta	Ph
flomyla new species	Erman unpublished	none	portable-case makers							CA		Nevada County, Sagehen Creek basin, Sierras	Arthropoda	Hexapoda	Insecta	Pto
patania	Kolenati, 1848	115935	portable-case makers	valid	799	yes	yes	Wiggins 1996	17+			generally higher elevation, cool-cold montane streams	Atthropoda	Hexapoda	Insecta	Pti
Radoma	Hagen, 1864	598478	portable-case makers	synanym				Ross 1947				North American species transferred to Apatania	Arthropoda	Hexapoda	Insecta	Phi
patania alberta	Nimmo, 1971	604490	portable-case makers							AB	BC ID MT	northern Rockies	Arthropoda	Hexapoda	Insecta	Ph
patania arzona	Wiggins, 1973	115942	portable-case makers							AZ		spring streams at higher elevations in AZ	Arthropoda	Некароба	Insecta	Ph
patania barri	Smth, 1969	604495	portable-case makers							IDI	AT.	nothern Rockies	Arthropoda	Некароба	Insecta	Ph
patania chasica	(Denning, 1954)	604503	portable-case makers							CA	2 ID MIT OR UT			Hexapoda		Pto
Loatania comosa	(Denning, 1949)	110544	portable-case makers							10.1	MTUT	northern Rockies and interior ranges in UT	Adhenonda	Hexanoda	benerta	Dho

Column E

Status of name

Valid

Synonym

Monotypic

Single North America

Dubious

Discontinued

					PILAM	PNALP	PULL	P								
					STE	STE	STE	Identification	Number of N	Jorth			Taxonomi	ic Hierarchy		
nal identification	Taxonomic authority	ITIS TSN	Common name	Status	1	2	3 /		American spe	ecles	Distribution		Phylum	Subphylus	e Class	S
ichoptera atanlidae lomyla		115095	caddisfies	valid				Wiggins 1996				the occassional specimen that can't be identified to family should be entered as Trichoptera	Athropoda	: Hexapoda	Insecta	P
ataniidae	Wallengren, 1886	598182	portable-case makers	valid	Dil	DI	DI /	Wiggins 1996	33			identify to genus, or species for genera monotypic in western North America whenever possible.	Arthropoda	: Hexapoda	Insecta	p
omyla	Banks, 1916	116438	portable-case makers	valid	yes	yes	yes	Wiggins 1996	13			primarily subalpine and alpine springs and seeps; lanue cannot be identified to species	Arthropoda	s Hexapoda	Insecta	p
Imania	Martynov, 1935	116381	portable-case makers	synonym								synonym of Allomyia	Arthropoda	: Hexapoda	Insecta	5
omyla acanthis	(Ross, 1960)	116451	portable-case makers								AW S		Arthropoda	в Некароба	Insecta	- 5
myla bifosa	(Ross, 1950)	116453	portable-case makers							AB	BC MT WY	mid and northern Rockies and coastal ranges in BC, high elevation, springs and small streams	Arthropoda	: Hexapoda	Insecta	- 1
myla cascadis	(Ross, 1950)	116441	portable-case makers							AB	BC MT OR WA		Arthropoda	Hexapoda	Insecta	
myla chama	(Denning, 1953)	116443	portable-case makers							CO) WY	Snowy Range Mountains, Albany County, high elevation	Arthropoda	я Некароба	Insecta	
myla cidolpea	(Schmid, 1968)	604534	portable-case makers							BC	CA OR WA	Cascades & coastal ranges; maritime; mid to high elevation; springs and small cold streams	Athropoda	в Некароба	Insecta	
nyia gnathos	(Ross, 1960)		portable-case makers							CC	UT		Arthropoda	: Hexapoda	Insecta	
ryla hector	(Nimmo, 1971)		portable-case makers							AB	į.			e Hexapoda		
ryla picoides	(Ross, 1960)	115447	portable-case makers							AK	(BC WA?	coastal ranges	Arthropoda	e Hexapoda	Insecta	
yie renoe	(Mine, 1935)	116449	portable-case makers							NV	1		Athropoda	некароба	Insecta	
yie scotti	(Wiggins, 1973)	604539	portable-case makers							CF	R (Mount Hood)			и Некароба		
yia thomasi	(Nimmo, 1977)	604641	portable-case makers							AB	1			e Hexapoda		
yia tripunctata	(Banks, 1900)	116439	portable-case makers							AB	AK BC CO MT WA WY			Hexapoda		
nyla new species	Erman unpublished	none	portable-case makers					4		CA				: Hexapoda		
ania	Kolenati, 1845	115936	portable-case makers	valid	795	yes		Wigges 1996	17+					a Hexapoda		
adoma	Hagen, 1864	598478	portable-case makers	synonym				Ross 1547						в Некароба		
ania alberta	Nammo, 1971	604490	portable-case makers							AB	BC ID MT			e Hexapoda		
ania arizona	Wiggins, 1973	115942	portable-case makers							AZ				Hexapoda .		
tania barri	Smth, 1969	604455	portable-case makers								MT			a Hexapoda		
dania chasica	(Denning, 1954)		portable-case makers								IZ ID MIT OR UT			e Hexapoda		
	(Canning, 1949)	110544									MILLI	northern Rockies and interior ranges in UT				

Cross Referencing

Rhyacophila brunnea/vemna group includes

Rhyacophila brunnea

Rhyacophila brunnea group

Rhyacophila acropedes

Rhyacophila acropedes group

Rhyacophila vao

Rhyacophila vemna

					PHAM	PINAL PI	MAMP							
					STE	STE S	TE Identifica	stion I	Number of North			Taxonomic Hieran	thy	
Final identification	Taxonomic authority	ITIS TSN	Common name	Status	1	2	3 Literatur		American species	Distribution	Comments	Phylum Subphy	lun Claw	15
Trichoptera		115095	caddisfies	valid	D/I	D1 (D1 Wiggins 1	996			the occassional specimen that can't be identified to family should be entered as Trichoptera	Arthropoda Hexapor	la Insec	cta
Apatanlidae	Waltengren, 1895	598182	portable-case makers	valid	Dil	D1 1	D1 Wiggins 1	996	33		identify to genus, or species for genera monotypic in western North America whenever possible	Arthropoda Hexapor	la Insec	cta
Allomyla	Banks, 1916	116438	portable-case makers	valid	yes	yes y	es Wiggins 1	996	13		primarily subalgine and alpine springs and seeps; lange cannot be identified to species	Arthropoda Hexapor	la Insec	cta
Imania	Martynov, 1935	116381	portable-case makers	synonym							synonym of Allomyia	Arthropoda Hexapor	is insec	cta
Allomy's acardhis	(Ross, 1950)	116451	portable-case makers							OR WA	subalpine & alpine small streams and springs in the Cascades	Arthropoda Hexapor	is insec	cta
Allomyla bifosa	(Ross, 1950)	116453	portable-case makers							AB BC MT WY	mid and northern Rockies and coastal ranges in BC, high elevation, springs and small streams	Arthropoda Hexapor	la Insec	cta
Afomyla cascadis	(Ross, 1950)	115441	portable-case makers							AB BC MT OR WA	Cascades & northern Rockies, high elevation springs and small streams	Arthropoda Hexapor	la Insec	cta
Afomyla chama	(Denning, 1953)	116443	portable-case makers							CO WY	Snowy Range Mountains, Albany County, high elevation	Arthropoda Hexapor	la Insec	cta
Afomyla cidolpes	(Schmid, 1968)	604534	portable-case makers							BC CA OR WA	Cascades & coastal ranges; maritime; mid to high elevation; springs and small cold streams	Athropoda Hexapor	la Insec	cta
Afomyla gnathos	(Ross, 1950)	116445	portable-case makers							COUT	southern Rockies	Athropoda Hexapor	la Insec	cta
Aflomyia hector	(Nimmo, 1971)	604637	portable-case makers							AB	northern Rockies, high elevation small streams	Arthropoda Hexapor	la Insec	cta
Aflomyla picoides	(Ross, 1950)	116447	portable-case makers							AK BC WA?	coastal ranges	Athropoda Hexapor	la Insec	cta
Allomyia renoa	(Mine, 1935)	116449	portable-case makers							NV	Reno area in Sierras	Arthropoda Hexapor	la Insec	cta
Allomyla scotti	(Wiggins, 1973)	604539	portable-case makers							OR (Mount Hood)	this species has "homs" on the head, but may not be the only species with homs	Athropoda Hexapor	la Insec	cta
Allomyia thomasi	(Nimmo, 1977)	604641	portable-case makers							AB	northern Rockies, high elevation small streams	Arthropoda Hexapol	la Insec	cta
Allomyia tripunctata	(Banks, 1900)	116439	portable-case makers							AB AK BC CO MT WA WY	Coastal ranges, Rockies and Interior ranges, high elevation	Arthropoda Hexapor	la Insec	cta
Aflomyla new species	Erman unpublished	none	portable-case makers							CA	Nevada County, Sagehen Creek basin, Sierras	Arthropoda Hexapor	la Insec	cta
Apatania	Kolenati, 1848	115935	portable-case makers	valid	yes	yes y	res Wiggins 1	996	17+		generally higher elevation, cool-cold montane streams	Arthropoda Hexapor	la Insec	cta
Radoma	Hagen, 1864	550470	portable-case makers	synonym			Ross 194	7			North American species transferred to Apatania	Arthropoda Hexapor	la Insec	cta
Apatania alberta	Nimmo, 1971	604490	portable-case makers							AB BC ID MT	northern Rockies	Arthropoda Hexapor	ia Insec	cta
Apatania arzona	Wiggins, 1973	115942	portable-case makers							AZ	spring streams at higher elevations in AZ	Arthropoda Hexapor	ia Insec	cta
Apatania barri	Smith, 1969	604495	portable-case makers							ID MT	northern Rockies	Arthropoda Hexapor	ia Insec	cta
Apatania chasica	(Denning, 1954)		portable-case makers							CA7 ID MT OR UT		Athropoda Hexapor		
Anatania comosa	(Denning 1949)	110544	portable-case makers							ID MT UT	northern Rockies and infusior canoes in UT	Athennots Herano	to broad	122

Columns F-H: STE Levels 1-3

	PNAMP STE 1	PNAMP STE 2	PNAMP STE 3
Brachycentrus	yes	D/I	D/I
Brachycentrus occidentalis		yes	yes

D/I= damaged or immature specimen(s): flag as unique or not unique

				PRIAM PRIAMP			IP.									
					STE	STE	STE	Identification	a Number	r of North			Taxonomi	ic Hierarchy	4	
inal identification	Taxonomic authority	ITIS TSN	Common name	Status	1	2	3	Literature	America	an species	Distribution	Comments	Phylum	Subphylus	e Class	5
choptera		115095	caddisfies	valid				Wiggins 1996				the occassional specimen that can't be identified to family should be entered as Trichoptera	Arthropoda	s Hexapoda	Insecta	1
taniidae	Wallengren, 1896	598182	potable-case makers	valid	DII	DI	DI	Wiggins 1996	6 7	.13		identify to genus, or species for genera monotypic in western North America whenever possible.	Athropoda	a Hexapoda	Insecta	
myla	Banks, 1916	116438	portable-case makers					Wiggins 1996		13			Arthropoda	a Hexapoda	Insecta	
nania	Martynov, 1935	116381	portable-case makers	synonym	/								Athropoda	a Hexapoda	Insecta	
yia acanthis	(Ross, 1950)	116451	portable-case makers	1							OR WA			a Hexapoda		
via bifosa	(Ross, 1950)	116453	portable-case makers								AB BC MT WY	mid and northern Rockies and coastal ranges in BC, high elevation, springs and small streams in	Arthropoda	Hexapoda	Insecta	
ria cascadis	(Ross, 1950)	116441	portable-case makers								AB BC MT OR WA	Cascades & northern Rockies, high elevation springs and small streams	Arthropoda	a Hexapoda	Insecta	
ria chama	(Denning, 1953)	116443	portable-case makers	/							CO WY	Snowy Range Mountains, Albany County, high elevation	Arthropoda	a Hexapoda	Insecta	
yia cidolpes	(Schmid, 1968)	604634	portable-case makers	/							BC CA OR WA	Cascades & coastal ranges; maritime; mid to high elevation; springs and small cold streams	Athropoda	a Hexapoda	Insecta	
yia gnathos	(Ross, 1950)	116445	portable-case makers	/							COUT	southern Rockies	Arthropoda	a Hexapoda	Insecta	
yia hector	(Nimmo, 1971)	604537	portable-case makers								AB	northern Rockies, high elevation small streams	Athropoda	a Hexapoda	Insecta	
yla picoides	(Ross, 1950)	116447	portable-case makers	/							AK BC WA7	coastal ranges	Athropoda	a Hexapoda	Insecta	
yia renoa	(Mine, 1935)	116449	portable-case makers	/							NV		Arthropoda	a Hexapoda	Insecta	
yie scotti	(Wiggins, 1973)	604639	portable-case makers	/							OR (Mount Hood)	this species has "homs" on the head, but may not be the only species with homs	Athropoda	a Hexapoda	Insecta	
ryla thomasi	(Nimmo, 1977)	604641	portable-case makers	/							AB		Athropoda	a Hexapoda	Insecta	
nyla tripunctata	(Banks, 1900)	116439	portable-case makers								AB AK BC CO MT WA WY	Coastal ranges, Rockies and Interior ranges, high elevation	Arthropoda	a Hexapoda	Insecta	
ryla new species	Erman unpublished	none	portable-case makers	/							CA			a Hexapoda		
ania	Kolenati, 1848	115936	portable-case makers	valid	yes	yes	yes	Wiggins 1996	1 7	17+				a Hexapoda		
adoma	Hagen, 1864		portable-case makers					Ross 1947					Athropoda	a Hexapoda	Insecta	
mia alberta	Nimmo, 1971	604490	portable-case makers	7							AB BC ID MT			a Hexapoda		
lania arizona	Wiggins, 1973	115942	portable-case makers	/	/						AZ			a Hexapoda		
lania barri	Smth. 1969	604435	portable-case makers	/							ID MT	northern Rockies	Arthropoda	a Hexapoda	Insecta	
dania chasica	(Denning, 1954)		portable-case makers								CA7 ID MT OR UT			a Hexapoda		
	Champion 1949)	410544									ID MT UT	northern Borisian and inturior ranges in LIT	Astronocto		- benarks	

Column I

Identification Literature

- Reference used for identification
- Reference used when there is taxonomic controversy
 e.g Hydropsyche use Wiggins 1996 broader definition
 Ceratopysche or Symphitopsyche not accepted

					PILAM	PNALP	TALLE	P							
					STE	STE	STE /	Identification	Number of No	th.		Taxonomi	ic Hierarchy		
Final identification	Taxonomic authority	ITIS TSN	Common name	Status	1	2	3 /	Literature	American spec	let Distribution		Phylum	Subphylus	e Class	Set
Trichoptera		115095	caddishes	valid				Wiggins 1996			the occassional specimen that can't be identified to family should be entered as Trichoptera	Arthropoda	Hexapoda	Insecta	Pto
Apataniidae	Waltengren, 1886	598182	portable-case makers	volid	DIE	D1	DI I	Wiggins 1996	33		identify to genus, or species for genera monotypic in western North America whenever possible.	Arthropoda	Hexapoda	Insecta	Pin
Allomyla	Banks, 1916	116438	portable-case makers	valid	yes	yes	yes.	Wiggins 1996	13		primarily subalpine and alpine springs and seeps; lange cannot be identified to species	Arthropoda	Hexapoda	Insecta	Pto
Imania	Martynov, 1935	116381	portable-case makers	synonym							synonym of Allomyia	Arthropoda	Hexapoda	Insecta	Pter
Allomyia acanthis	(Ross, 1960)	116451	portable-case makers							OR WA	subalpine & alpine small streams and springs in the Cascades	Arthropoda	Hexapoda	Insecta	Pto
Allomyia bifosa	(Ross, 1950)	116453	portable-case makers							AB BC MT WY	mid and northern Rockies and coastal ranges in BC, high elevation, springs and small streams.	Arthropoda	Hexapoda	Insecta	Pte
Allomyia cascadis	(Ross, 1960)	115441	portable-case makers							AB BC MT OR WA		Athropoda	Hexapoda	Insecta	Pho
Afomyla chama	(Denning, 1953)	116443	portable-case makers							CO WY		Arthropoda	Hexapoda	Insecta	Pho
Aflomyla cidolpes	(Schmid, 1968)	604534	portable-case makers							BC CA OR WA		Arthropoda	Hexapoda	Insecta	Ptir
Allomyia gnathos	(Ross, 1960)	116445	portable-case makers							COUT	southern Rockies	Arthropoda	Hexapoda	Insecta	Ptic
Allomyla hector	(římmo, 1971)	604637	portable-case makers							AB	northern Rockies, high elevation small streams	Athropoda	Hexapoda	Insecta	Pto
Aflomyla picoides	(Ross, 1960)	116447	portable-case makers							AK BC WA?	coastal ranges	Arthropoda	Hexapoda	Insecta	Phi
Alfomyla renoa	(Mine, 1935)	116449	portable-case makers							NV	Reno area in Sierras	Arthropoda	Hexapoda		Phir
Aflomyla scotti	(Wiggins, 1973)	604529	portable-case makers							OR (Mount Hood)	this species has "homs" on the head, but may not be the only species with homs	Athropoda	Некароба	Insecta	Pto
Allomy's thomasi	(Nimmo, 1977)	604641	portable-case makers							AB		Arthropoda	Hexapoda	Insecta	Ptic
Afomyla tripunctata	(Banks, 1900)	116439	portable-case makers							AB AK BC CO MT WA WY	Coastal ranges, Rockies and Interior ranges, high elevation	Arthropoda	Hexapoda	Insecta	Pter
Afomyla new species	Erman unpublished	none	portable-case makers							CA	Nevada County, Sagehen Creek basin, Sierras	Arthropoda	Hexapoda	Insecta	Phil
Apatania	Kolenati, 1848	115935	portable-case makers	valid	yes	yes	799	Wiggins 1996	17+		generally higher elevation, cool-cold montane streams	Arthropoda	Hexapoda	Insecta	Phi
Radoma	Hagen, 1964	598478	portable-case makers	pynonym				Ross 1947			North American species transferred to Apatania	Arthropoda	Hexapoda	Insecta	Pto
Apatania alberta	Nimmo, 1971	604490	portable-case makers							AB BC ID MT	northern Rockies	Arthropoda	Hexapoda	Insecta	Phi
Apatania arzona	Wiggins, 1973	115942	portable-case makers							AZ	spring streams at higher elevations in AZ	Arthropoda	Hexapoda	Insecta	Phi
Apatania barri	Smth. 1969	604495	portable-case makers							ID MT	nothern Rockies	Arthropoda	Hexapoda	Insecta	Pte
Apatania chasica	(Denning, 1964)	604503	portable-case makers							CA7 ID MT OR UT	northern Rockies, interior ranges OR, doubtful records from CA	Arthropoda	Hexapoda	Insecta	Pti
	(Canning, 1949)	110544								ID MT UT	northern Rockies and interior ranges in UT				

Columns J-L

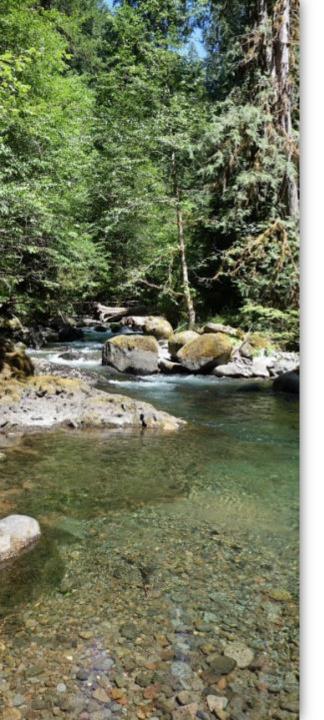
- J. Number of North American Species
- K. Distribution: Western North America states and provinces
- L. Comments necessary for any clarification on name or appropriate STE level

				PNAM	PNAA P	NAMP									
					STE	STE 5	TE Identifica	tion h	Number of North		1	faxonomic	Hierarchy	1	
Final identification	Taxonomic authority	ITIS TSN	Common name	Status	1	2	3 Literature	ı A	umerican species	Distribution		Phylum 5	Subphylur	Class	Su
richoptera		115095	caddisfies	valid	D/I	D/I	D1 Wiggins 1	996				Arthropoda F			.Pt
pataniidae	Wallengren, 1886	598182	portable-case makers	valid	DII	D4	D1 Wiggins 1	996	33		identify to genus, or species for genera monotypic in western North America whenever possible A	Athropoda I	Hexapoda	Insecta	Pt
Homyla	Banks, 1916	116438	portable-case makers	valid	yes	yes 1	yes. Wiggins t	996	13		primarily subalgine and algine springs and seeps; lange cannot be identified to species A	Arthropoda F	Hexapoda	Insecta	Pt
Imania	Martynov, 1935	116381	portable-case makers	synonym							synonym of Allomyia A	Arthropoda h	Hexapoda	Insecta	Pt
fornyla acanthia	(Ross, 1950)	116451	portable-case makers							OR WA	subalpine & alpine small streams and springs in the Cascades A	Arthropoda h	Hexapoda	Insecta	Pt
Viornyia bifosa	(Ross, 1950)	116453	portable-case makers							AB BC MT WY	mid and northern Rockies and coastal ranges in BC, high elevation, springs and small streams A	Athropoda I	Hexapoda	Insecta	Pt
Vomyia cascadis	(Ross, 1950)	116441	portable-case makers							AB BC MT OR WA	Cascades & northern Rockies, high elevation springs and small streams A	Arthropoda h	Hexapoda	Insecta	Pt
llomyla chama	(Denning, 1953)	116443	portable-case makers							CO WY	Snowy Range Mountains, Albamy County, high elevation A	Arthropoda F	Hexapoda	Insecta	Pt
fornyla cidolpes	(Schmid, 1968)	604634	portable-case makers							BC CA OR WA	Cascades & coastal ranges; maritime; mid to high elevation; springs and small cold streams. A	Arthropoda H	Hexapoda	Insecta	P
fornyla gnathos	(Ross, 1960)	116445	portable-case makers							COUT	southern Rockies A	Arthropoda II	Hexapoda	Insecta	P
flomyia hector	(Nimmo, 1971)	604637	portable-case makers							AB	northern Rockies, high elevation small streams A	Arthropoda h	Hexapoda	Insecta	P
Nomyla picoides	(Ross, 1960)	116447	portable-case makers							AK BC WA7	coastal ranges A	Arthropoda II	Hexapoda	Insecta	P
fornyla renoa	(Mine, 1935)	116449	portable-case makers							NV	Reno area in Sierras A	Arthropoda F	Hexapoda	Insecta	Pt
flomyia scotti	(Wiggins, 1973)	604639	portable-case makers							CR (Mount Hood)	this species has "homs" on the head, but may not be the only species with homs A	Arthropoda H	Hexapoda	Insecta	Pt
Nomyia thomasi	(Nimmo, 1977)	604641	portable-case makers							AB	northern Rockies, high elevation small streams A	Arthropoda F	Hexapoda	Insecta	Pt
flomyla tripunctata	(Banks, 1900)	116439	portable-case makers							AB AK BC CO MT WA WY	Coastal ranges, Rockies and Interior ranges, high elevation A	Arthropoda H	Hexapoda	Insecta	Pt
flomyla new species	Erman unpublished	none	portable-case makers							CA	Nevada County, Sagehen Creek basin, Sierras A	Arthropoda H	Hexapoda	Insecta	Pt
patania	Kolenati, 1948	115935	portable-case makers	valid	yes	yes y	yes Wiggins 1	996	17+		generally higher elevation, cool-cold montane streams A	Arthropoda H	Hexapoda	Insecta	Pt
Radoma	Hagen, 1864	598478	portable-case makers	synonym			Ross 1947	7			North American species transferred to Apatania A	Arthropoda H	Hexapoda	Insecta	P
patania alberta	Nimmo, 1971	604490	portable-case makers							AB BC ID MT	northern Rockies A	Arthropoda H	Hexapoda	Insecta	Pt
patenia arizona	Wiggins, 1973	115942	portable-case makers							AZ	spring streams at higher elevations in AZ A	Arthropoda H	Hexapoda	Insecta	Pt
patania barri	Smith, 1969	604495	portable-case makers							ID MT	northern Rockies A	Arthropoda H	Hexapoda	Insecta	P
Spatania chapica	(Denning, 1954)	604503	portable-case makers							CA7 ID MT OR UT	northern Rockies, interior ranges CR, doubtful records from CA A	Arthropoda H	Hexapoda	Insecta	Pti
Anatonia comosa	(Denning, 1949)	111544	portable-case makers							ID MT UT	northern Rockies and interior rances in UT	Arthropoda I	Assanota	Innacta	500

Columns M-AB

Taxonomic Hierarchy

Includes subfamilies, tribes, species groups and even some subspecies



NWSTE Taxa Lists

Groups ready for review

Bivalvia, Elmidae, Ephemeroptera, Gastropoda, Plecoptera, Trichoptera

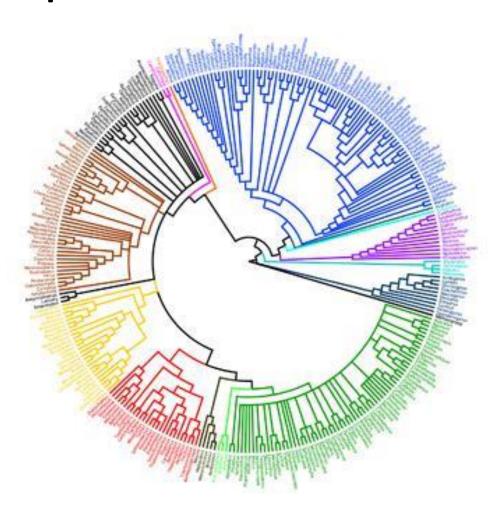
Groups in progress

Chironomidae, Crustacea, Dytiscidae, Hemiptera, Odonata, Oligochaeta

Still to go

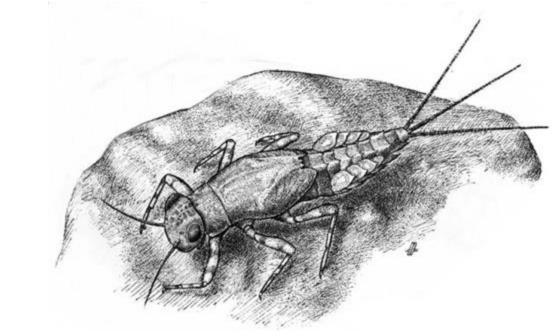
Hydrophilidae, Lepidoptera, Megaloptera, Misc. (other Coleoptera, Diptera, non-insects), Neuroptera, Provisional taxa

Recent Taxonomic Changes Incorporated in the NWSTE



Ephemeroptera

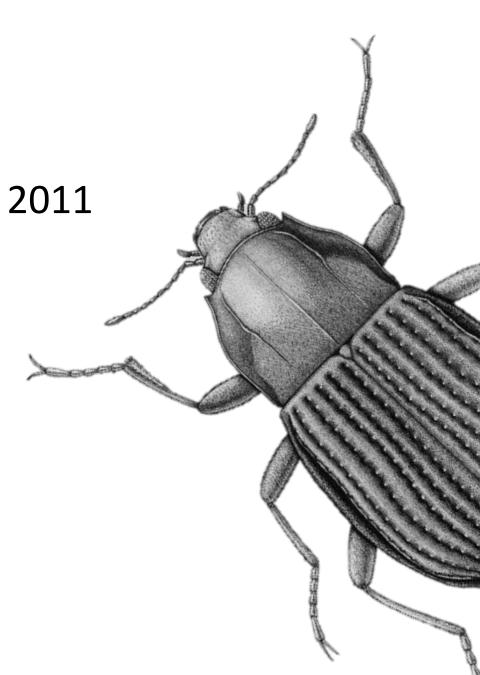
- Caenidae
 - Susperatus sp.
- Ephemerellidae
 - Serratella tibialis moved to genus Ephemerella
 - Serratella velmae moved to genus Ephemerella
 - Serratella teresa moved to genus Matriella



Coleoptera

Elmidae - Bryelmis Barr, 2011





Gastropoda

Hydrobiidae Split into Four Families

Amnicolidae

Colligyrus

Cochliopidae

Tryonia

Hydrobiidae

Potamopyrgus

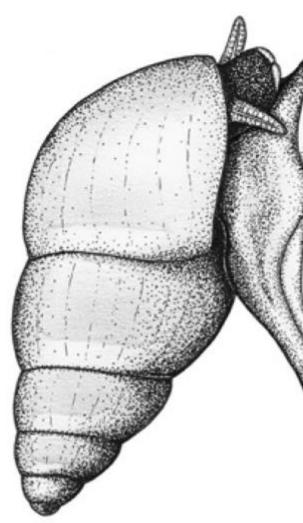
Pyrgulopsis

Lithoglyphidae

Fluminicola

Pristinicola

Taylorconcha



Gastropoda



Pleuroceridae

Juga now in Family Semisulcospiridae



Ancylidae Placed into Family Planorbidae

Gastropoda



Physidae Genus Physella reinstated



Lymnaeidae Fossaria is now Galba

Invasives

- Bithynia tentaculata
- Biomphilaria havenensis
- Melanoides tuberculata
- Exopalaemon modestus



Return on Investment



Level of Effort

- Oligochaeta to class or family for STE 2?
- Acari (mites) to subclass or genus?



ITIS Taxonomic Serial Number



How important are these to users?

We assign provisional TSN's e.g. Rhyacophila 115097 Rhyacophila alberta group 115097a

ITIS Taxonomic Serial Number



- Uncertainty of continued support for ITIS
- ITIS does not accept species groups, etc.
- ITIS is years behind

Do we want to have our own PNW serial number?



Provisional Taxa



- Develop process to document undescribed taxa?
- Use the SCAMIT Model

Southern California Association of Marine Invertebrate Taxonomists scamit.org

Data Coding



- Unique/Not Unique Taxa
- STE not achieved?
- Incidental Taxa



PNAMP guidance



- Minimum subsample, e.g. 500 or 600 organisms?
- SOP's for laboratory protocols?
- QA/QC for sorting efficacy and taxonomy?

Future additions to the STE



- Standardizing taxa traits?
- Common names and distribution tables?
- Drift samples, fish stomach content samples, others?





- Final draft of all taxa by March 2014
- Initial review done by April 2014
- Final 2014 version by May 1, 2014

Where to find the NWSTE Documents



http://www.pnamp.org/project/4210

OR

Go to: pnamp.org > Projects >

Northwest Standard Taxonomic Effort

OR

Email: apuls@usgs.gov



ABOUT

EVENTS

GET INVOLVED

TOPICS

PROJECTS TOOLKIT

Northwest Standard Taxonomic Effort

Project Description

This project is a sub-component of a larger PNAMP project: Habitat Data Sharing

There is agreement among aquatic ecologists in the Pacific Northwest that the sharing of macroinvertebrate data would be aided by a regional standard taxonomic effort (STE) agreement. Data sharing is constrained in part by lack of agreement among organizations that collect and/or process macroinvertebrates samples as to the authoritative taxonomic nomenclature appropriate for collected specimens and the level of taxonomic resolution that is appropriate for different assessment purposes. Following on work done in other regions, the group wishes to explore the need and opportunity for standard taxonomic effort (STE) agreements in the Pacific Northwest. This need was presented at a sponsored session at the October 2012 Northwest Biological Assessment Workgroup (NBAW) workshop. The first part of the STE session included 4 talks representing various stakeholder perspectives (see related documents to the lower right), and was followed by discussion on how to frame a regional STE over the course of the next year. The goal is to have a draft Northwest STE plan for approval at the 2013 NBAW workshop.

Project Team

This project is being conducted through in-kind contributions of the Macroinvertebrate Planning Group, a sub-group of the Habitat Data Sharing Project. Taxonomists Bob Wisseman (ABA), Sean Sullivan (Rhithron), and John Pfeiffer (EcoAnalysts) are leading the development of the NWSTE taxa lists. The project is coordinated by PNAMP staff biologist Amy Puls.

Highlights

We need your help reviewing the draft NWSTE taxa lists!

Nov 5 2013 - 11:13pm

We are continuing to make progress on developing and refining the NWSTE taxa lists. Lists ready for review include: Bivalvia, Elmidae, Ephemeroptera, Gastropoda, Plecoptera and Trichoptera. We are seeking comments on suggested STE levels for individual taxa, errors seen, names you use that are missing from the STE list, and any other feedback you have.

Please list comments and questions with the specific spreadsheet row(s) and/or cell(s) to which your comments apply. You can list comments in a new sheet in the Excel file, in a Word document, or just in the body of an email.

General suggestions, comments, and/or questions should be emailed to Amy Puls (apuls@usgs.gov) cc'ing Bob Wisseman, Sean Sullivan and John Pfeiffer

Taxonomic group suggestions, comments, and questions can be emailed directly to the taxonomic group editor:

Bivalvia, Gastropoda, and Plecoptera: John Pfeiffer,

jpfeiffer@ecoanalysts.com

Elmidae and Ephemeroptera: Sean Sullivan, ssullivan@rhithron.com

Trichoptera: Bob Wisseman, bobwisseman@mac.com

Thanks in advance for your help in reviewing these lists!

Links to the lists

Bivalvia: http://www.pnamp.org/document/4319 Elmidae: http://www.pnamp.org/document/4395 Ephemeroptera: http://www.pnamp.org/document/4212 Gastropoda: http://www.pnamp.org/document/4394 Plecoptera: http://www.pnamp.org/document/4224 Trichoptera: http://www.pnamp.org/document/4211

Maintenance and Updates



- Process to propose and accept changes and updates?
- Volunteer editors for each group?

We need you



To help us review the taxa lists

General comments on suggested STE level for individual taxa

Any errors seen?

Review your data sets and databases for any names missing from the STE list – we'll include them

Review by Taxonomists



Internal review by labs

Aquatic Biology Associates, Inc.-Bob Wisseman

ABR, Inc.- Mike Cole

EcoAnalysts, Inc.- John Pfeiffer

Rhithron Associates, Inc.-Sean Sullivan

External review by other labs

USGS Denver - Scott Grotheer, Steve Moulton

Buglab, Logan Utah - Scott Miller

ABL lab, Chico, CA - Joe Slusark & crew

External review by specialists

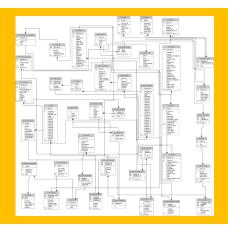
Bivalves- Ed Johannes, Deixus Consultants, Gerry Mackie, Univ. Guelph

Ephemeroptera- Luke Jacobus, Purdue

Plecoptera- Richard Baumann, Brigham Young Univ, John Sandberg, ABL

Trichoptera- Dave Ruiter

Review by Database Managers



Puget Sound Stream Benthos

WA DOE

OR DEQ

ID DEQ

MT DEQ

CA SWAMP

Private lab databases

USGS Biodata

Volunteers?



We are also still looking for help with developing the taxa lists for:

Hydrophilidae, Lepidoptera, Megaloptera, Misc. (other Coleoptera, Diptera, non-insects), Neuroptera, Provisional taxa



Additional Discussion Topics

- 1. How can we (taxonomists/data producers) best communicate taxonomic information? Common names? Citations?
- 2. What methods can be used at the bench to further reduce variability among data producers? Do these need to get incorporated into a STE methods section?
- 3. What else can we collectively address to reduce noise in bioassessment data?