

Species List for Great Smoky Mountains National Park material

Oligochaeta

Naididae

Nais communis Piguet

Insecta - Diptera

Tipulidae

Hexatoma sp.

Limonia sp.

Tipula ? sp.

Ceratopogonidae

Dasyhelea sp.

Dixidae

Dixella sp.

Psychodidae

Thaumaleidae

Thaumalea sp.

Chironomidae

Podonominae

Boreochlus persimilis (Johannsen)

Tanypodinae

Apsectrotanypus sp.

Brundiniella eumorpha (Sublette)

Conchapelopia sp.

Hudsonimyia karelena Roback

Krenopelopia sp.

Macropelopia sp.

Meropelopia americana (Fittkau)

Meropelopia sp.

Natarsia ? sp.

Zavreliomyia sp.

Diamesinae

Diamesa sp.

Prodiamesinae

Prodiamesa olivacea (Meigen)

Orthocladiinae

Antillocladius sp. nov. nr. *pluspilalus* Sæther

Brillia flavifrons (Johannsen)

Chaetocladius cf. *stamfordi* (Johannsen)

Chaetocladius sp.

Cricotopus nr. *fuscus* (Kieffer)

Corynoneura "scutellata Winnertz group" sp.

Corynoneura sp.

Eukiefferiella claripennis (Lundbeck) group sp.

Eukiefferiella gracei (Edwards) group sp.

Heleniella parva Sæther

Heterotrissocladius marcidus (Walker) group sp.

Limnophyes carolinensis Sæther

Limnophyes minimus (Meigen)

Limnophyes sp.

Lipurometriocnemus vixlobatus Sæther

Metriocnemus obscuripes (Holmgren)

species list (cont'd)

Orthocladius (*Eudactylocladius*) sp.
Orthocladius (*Orthocladius*) *dentifer* Brundin ?
Orthocladius (*Symposiocladius*) *lignicola* Kieffer
Paracricotopus sp.
Parametriocnemus sp.
Pseudorthocladius morsei Sæther
Pseudorthocladius tricanthus Sæther
Pseudosmittia forcipata (Goetghebuer)
Psilometriocnemus triannulatus Sæther
Psilometriocnemus sp.
Smittia sp. nov.
Thienemanniella sp.
Tvetenia "*bavarica* (Thienemann) group" sp.
Tvetenia sp.

Chironominae

Chironomini

Chironomus sp.
Microtendipes cf. *pedellus* (De Geer)
Polypedilum artifer (Curran) ?
Polypedilum scalaenum (Schränk) group sp.
Polypedilum simulans Townes
Polypedilum trigonus Townes
Stenochironomus woodi Borkent
Tribelos jucundum (Walker)

Tanytarsini

Micropsectra sp. 1
Micropsectra sp. 3
Micropsectra sp. 4
Micropsectra sp. 5
Micropsectra sp.
Skutzia sp. nov.?
Stempellinella sp.
Tanytarsus sp.
Zavrelia sp. nov.

Identifications of Great Smoky Mountains National Park material (samples P1- P51) for Dr. C.R. Parker
(A = adult; P = pupa; L = larva)
J.H. Epler 6 December 1992

P 1

BLRIS 22

- 1 *Zavrelimyia* sp. L
- 1 *Chaetocladius* sp. L

P 2

BLRI 30 6

- 1 *Natarsia* ? sp. L
- 1 unidentifiable Tanyodinae L

P 3

NC: Jackson Co., BLRI; in moss and under rocks in seep at Woodlin Cascade. MP446.7 4535 ft. CR Parker 18 July 1991

- 1 *Brundiniella eumorpha* P

P 4

NC: Swain Co., GRSM, sweeping along creek above flumes, Noland Ck Watershed. 2 July 1991 1707 m CR Parker

- 1 *Boreochlus persimilis* A
- 2 *Limnophyes carolinensis* A
- 1 *Psilometriocnemus triannulatus* A
- 1 unident. female Orthoclaadiinae A
- 2 *Polypedilum artifer* ? A

P5

NC: Buncombe Co., BLRI, roadcut seep 1/4 mile below Craggy Gardens Picnic Area MP367.6 5100 ft. CR Parker 18 July 1991

- 1 *Meropelopia americana* A
- 2 unident. female Orthoclaadiinae A
- 2 *Polypedilum trigonus* A

P6

NC: Swain Co., GRSM seep at roadcut, Clingamans Dome Rd at Noland Divide 23 July 1991 5925 ft. CR Parker & R Noseworthy

- 3 *Thaumalea* sp. L

P7

NC: Buncombe Co., BLRI, roadcut seep 1/4 mile below Craggy Gardens Picnic Area MP367.6 5100 ft. CR Parker 18 July 1991

- 2 *Meropelopia* sp. L

P8

NC: Swain Co., GRSM, seeps along trail from Forney Ridge Prkng Lt to Andrews Bald 11 June 1991 1850 m CR Parker

- 3 *Thaumalea* sp. L

P9

NC: Swain Co., FRSM seeps on cliff face, roadcut near Noland Divide Trailhead 4925 ft. 17 July 1991 Parker & R Noseworthy

- 3 *Heterotrissocladius marcidus* grp. sp. L

P10

NC: Buncombe Co., BLRI, roadcut seep 1/4 mile below Craggy Gardens Picnic Area MP367.6 5100 ft. CR Parker 18 July 1991

- 7 *Thaumalea* sp. L

P11

NC: Buncombe Co., BLRI, seep, roadcut cliff; just north Craggy Pinnacle Tunnel MP 364.3 5640 ft. CR Parker 19 July 1991

- 3 *Nais communis*

P12

NC: Buncombe Co., BLRI, large roadcut seep along Pkwy. from MP 356.6 to MP 356.2(?) approx. 1645 m CR Parker 30 August 1991

- 1 *Meropelopia* sp. L
- 3 *Chaetocladius* sp. L
- 1 *Corynoneura* sp. L
- 1 *Limnophyes* sp. L
- 4 *Micropsectra* sp. L

P13

NC: Swain Co., BLRI, spring seep, along N. Pkwy flowing S. MP 466.7; 2735 ft. 6 June 1991 CR Parker

- 1 *Corynoneura* sp. L
- 1 *Eukiefferiella claripennis* grp. sp. L
- 1 *Parametriocnemus* sp. P
- 1 *Thienemanniella* sp. L

P14

NC: Swain Co., GRSM, seeps on cliff face, roadcut near Noland Divide Trailhead 4925 ft. 17 July 1991 CR Parker & R Noseworthy

- 4 *Micropsectra* sp. L

P15

NC: Swain Co., GRSM, seeps on cliff face, roadcut near Noland Divide Trailhead 4925 ft. 17 July 1991 CR Parker & R Noseworthy

11 *Thaumalea* sp. L

P16

NC: Buncombe Co., BLRI, roadside seep .25 mi from Craggy Gardens Picnic Area MP 367.6; 1554 m CR Parker 29 August 1991

9 *Thaumalea* sp. L

1 *Hudsonimyia karelena* L

1 *Limnophyes* sp. L

1 *Parametriocnemus* sp. L

1 *Micropsectra* sp. L

P17

NC: Jackson Co, BLRI roadcut seep at cliff face, Scott Ck Ovrk MP 448.5 5050 ft. 11 July 1991 CR Parker

1 *Limonia* sp. L

2 *Dasyhelea* sp. :L

2 *Thaumalea* sp. L

1 unident. Tanypodinae L

1 *Paracricotopus* sp. L

P18

NC: Buncombe Co., BLRI, seep, roadcut cliff; just north Craggy Pinnacle Tunnel MP 364.3 5640 ft. CR Parker 19 July 1991

1 *Thaumalea* sp. L

P19

NC: Swain Co., GRSM, seeps on cliff face, roadcut near Noland Divide Trailhead 4925 ft. 17 July 1991 CR Parker & R Noseworthy

2 *Limonia* sp. L

P20

NC: Swain Co., GRSM Noland Ck 24 hr Drift Sample Noland Ck Watershed 1727 m 13 Aug '91 (IN) R Noseworthy

2 *Ceratopogonidae* A

1 *Brundiniella eumorpha* A

1 *Brundiniella eumorpha* L

1 *Meropelopia* sp. L

1 *Antillocladius* sp. nov. nr. *pluspilalus* A

1 *Corynoneura* "scutellata grp." sp. A

1 *Heleniella parva* A

2 *Heleniella parva* P

1 *Orthocladus* (*Symposiocladius*) *lignicola* P

1 *Parametriocnemus* sp. L

1 *Parametriocnemus* sp. P

5 *Psilometriocnemus triannulatus* A

P20 (cont'd)

3 *Psilometriocnemus triannulatus* P

5 *Tvetenia "bavarica* grp." sp. L

17 unident. female *Orthocladiinae* A

10 *Micropsectra* sp. 4 P

1 *Micropsectra* sp. 4 A } 10 specimens total

1 *Micropsectra* sp. 5 A } for these 2 taxa

1 *Stempellinella* sp. L

P21

NC: Jackson Co., BLRI in moss and under rocks in seep at Woodfin Cascade MP 446.7 4535 ft. CR Parker 18 July 1991

1 *Brundiniella eumorpha* L

2 *Tribelos jucundum* L

P22

NC Buncombe Co., BLRI seeps and muck of bog at Mt. Pisgah Cmpgmd. 12 July 1991 4860 ft. CR Parker MP 408.8

2 *Apsectrotanypus* sp. L

P23

NC: Jackson Co., BLRI roadcut seep at cliff face, Scott Ck Ovrk MP 448.5 5050 ft. 11 July 1991 CR Parker

3 *Tipula* ? sp. L

P24

NC: Jackson Co., BLRI seep, Bunches Bald Overlook on rock face of cliff MP 459.5; 4935 ft. 6 June 1991 CR Parker

2 *Thaumalea* sp. L

1 *Corynoneura* sp. L

4 *Paracricotopus* sp. L

P25

NC: Jackson Co., BLRI seep, Bunches Bald Overlook in ditch below cliff MP 459.5; 4935 ft. 6 June 1991 CR Parker

1 *Corynoneura* sp. L

1 *Parametriocnemus* sp. L

1 *Thienemanniella* sp. L

P26

NC: Swain Co., GSMNP Birch Spring, Birch Spring Shelter, AL ; trib Gaser CK 17 VII 89 Elev: 3600 D. Pipes, J. Koralewja

1 *Zavreliomyia* sp. L

2 *Parametriocnemus* sp. L

1 *Psilometriocnemus* sp. L

1 *Tvetenia* sp. L

P27

NC: Swain Co., GRSM sweeping Noland Ck above flumes at Pumphouse Rd 3 July 1991 5600 ft. CR Parker

- 1 *Limnophyes carolinensis* A
- 1 *Metriocnemus obscuripes* L
- 2 *Metriocnemus obscuripes* A
- 1 *Polypedilum artifer* ? A

P28

NC: Swain Co., GRSM Noland Creek near flumes on Pumphouse Road, 1695 m 17 June 1992 CR Parker

- 3 *Boreochlus persimilis* A
- 1 *Brundiniella eumorpha* A
- 5 *Pseudorthocladius morsei* A
- 1 *Pseudosmittia forcipata* A
- 2 *Smittia* sp. nov. A
- 5 unident. female Orthoclaadiinae A
- 1 *Microtendipes* cf. *pedellus* A
- 1 *Polypedilum simulans* A
- 4 *Polypedilum trigonus* A
- 1 *Micropsectra* sp. 4 A
- 1 *Zavrelia* sp. nov. A
- 2 female Tanytarsini A

P29

BLRI C37 MP 356.6 21 May 1992

- 1 *Zavrelimyia* sp. L
- 1 *Tanytarsus* sp. L

P30

BLRI C33A 4 Mar 92 MP 455.7

- 1 *Diamesa* sp. L

P31

BLRI M48 MP 314.3 15-7-92 (right)

- 3 *Brundiniella eumorpha* L
- 1 *Prodiamesa olivacea* L

P32

BLRI M7A MP 446.6 27 May 92

- Krenopelopia* sp. L
- Meropelopia* sp. L

P33

BLRI M60 MP 358.2 (R) 29 July 1992

- 1 *Polypedilum trigonus* A

P34

BLRI C38 MP 367.6 21 May 92

- 1 *Hexatoma* sp. L
- 1 *Brundiniella eumorpha* L
- 1 *Micropsectra* sp. L

P35

BLRI M51 MP 304.5 15/7/92

- 1 *Thaumalea* sp. L
- 1 *Chaetocladius* sp. L
- 1 *Corynoneura* sp. L
- 1 *Eukiefferiella claripennis* grp. sp. L
- 1 *Eukiefferiella gracei* grp. sp. P
- 2 *Eukiefferiella gracei* grp. sp. L
- 1 *Orthocladius* (*Eudactylocladius*) sp. L
- 2 *Orthocladius* (*Eudactylocladius*) sp. P/A

P36

NC: Swain Co., GRSM Noland Ck 24 hr Drift Sample Noland Ck Watershed 1727 m 3 Mar 92 R Noseworthy

- 2 *Orthocladius dentifer* ? A
- 11 unident. female Orthoclaadiinae A

P37

NC: Swain Co., GRSM Noland Ck 24 hr Drift Sample Noland Ck Watershed 1727 m 20 Aug 92

R Noseworthy

- 1 Psychodidae A
- 1 Ceratopogonidae A
- 1 *Brundiniella eumorpha* A
- 2 *Antillocladius* sp. nov. nr *pluspilalus* A
- 1 *Brillia flavifrons* L
- 1 *Heleniella parva* P
- 5 *Heleniella parva* A
- 4 *Psilometriocnemus triannulatus* A
- 1 *Orthocladius dentifer* ? A
- 2 *Tvetenia "bavarica* grp." sp. L
- 4 *Micropsectra* sp. P
- 10 *Micropsectra* sp. A

P38

BLRI S-A 5-19-92 Whetstone Ridge Horse Pasture

- 1 *Diamesa* sp. L

P39

BLRI M9D Pisgah Campground Bog 11 June 92

- 1 *Macropelopia* sp. L
- 1 *Polypedilum scalaenum* grp. sp. L

P40

NC: Watauga Co., BLRI sphagnum bog, Julian Price Park Wetlands Natural Area MP 296.5 1035 m CR Parker 12 September 1991

1 *Chironomus* sp. L

P41

NC: Swain Co., GRSM in seeps among algae and moss acid bog at Andrews Bald 11 June 1991 1767 m CR Parker

1 *Meropelopia* sp. L

2 *Chaetocladius* sp. L

P42

TN: Sevier Co., GSMNP Rocky Spur Br. upstream of Roaring Fk. Mtr. Nat. Trail, 7 VI 90, Parker, Pipes, Cager

2 *Dixella* sp. A

1 *Stenochironomus woodi* A

P43

BLRI M53A Tanawha Trail

1 unident. female Tanypodinae A

1 *Metriocnemus obscuripes* A

2 unident. female Orthoclaadiinae A

4 *Micropsectra* sp. A

P44

NC: Haywood Co., BLRI boggy shrub wetland seep, Soco Gap MP 455.7; 4300 ft. 6 June 1991 CR Parker

1 *Corynoneura* sp. A

1 *Limnophyes carolinensis* A

1 *Pseudorthocladus tricanthus* A

1 *Micropsectra* sp. 3 A

1 *Skutzia* sp. nov.?

P45

NC: Haywood Co., BLRI sweeping seep area, woodland shrub bog at Soco Gap 13 June 1991 1311 m CR Parker

2 Ceratopogonidae A

1 *Boreochlus persimilis* A

1 *Chaetocladius* cf. *stamfordi* A

1 *Cricotopus* nr. *fuscus* A

5 *Limnophyes minimus* A

7 unident. female Orthoclaadiinae A

5 *Polypedilum trigonus* A

1 unident. female Chironomini A

2 *Micropsectra* sp. 1 A

1 *Micropsectra* sp. 3 A

2 *Skutzia* sp. nov. ? A

6 *Zavrelia* sp. nov. A

3 unident. female Tanytarsini A

P46

BLRI M-49

MP 315.6 15 July 92

1 *Macropelopia* sp. L

4 *Prodiamesa olivacea* L

1 *Micropsectra* sp. L

1 *Tanytarsus* sp. L

P47

NC: Buncombe Co., BLRI roadside seep, on S flowing S; .4 mi N Bee Tree Gap MP 367.2 1524 m CR Parker 30 August 1991

6 *Thaumalea* sp. L

P48

NC: Swain Co., GRSM Noland Ck Noland Ck Watershed 1727 m 30 Oct 91

R Noseworthy

2 unident. female Orthoclaadiinae A

P49

BLRI C38 MP 367.6 21 May 92

1 *Thaumalea* sp. L

1 *Conchapelopia* sp. L

1 *Micropsectra* sp. L

P50

NC: Swain Co., GRSM Noland Ck 24 hr Drift Sample Noland Ck Watershed 1727 m 3 Mar 92

R Noseworthy

1 *Chaetocladius* sp. L

1 *Eukiefferiella gracei* grp. sp. L

P51

BLRI M-45 Hwy 221 N of MP 305 14 July 92

1 *Lipurometriocnemus vixlobatus* A

1 unident. female Orthoclaadiinae A



John H. Epler, Ph.D.

Rt. 3, Box 5485
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(904) 926-3700

Environmental/Biological Consulting
Macroinvertebrate Identification
Specializing in Chironomidae

8 December 1992

Dr. C.R. Parker
U.S. Dept. of Interior
National Park Service
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Dr. Parker:

I have finished the determinations of the Smoky Mountains National Park Chironomidae material sent in September. Enclosed you will find a list of specimens by sample (I coded all your samples from P1 to P51; this code number is listed with the label information, followed by the species from that sample vial), a species list of all taxa identified and an invoice for the identification of material.

The material sent contained more than Chironomidae; I have identified the majority of the material, but I did not identify adult Ceratopogonidae or Psychodidae. (As we discussed over the phone 25 November, you stated that you had a ceratopogonid person.) I believe that the identifications were hampered somewhat by your material being preserved in formaldehyde or Kahle's (i.e., specimens were difficult to prepare properly). These preservatives are great for whole larval preservation, but these solutions dehydrate/solidify muscle tissue that is then difficult to macerate (clear) for specimens which must be observed with a compound microscope. 70-80% ethanol would make a much better preservative for Chironomidae adults and immature stages. You might want to try collecting some material alive and attempt to rear the adults.

Your material was quite interesting! Much was what I would call "typical" or "expected" from the habitats collected. A good deal of work has been done on the chironomid fauna of seeps and similar areas in the SE US, but much more work is needed. Your material appears to contain about 8 undescribed species, and there appears to be sufficient material of some of these taxa to allow their description. I will be returning the bulk of your material to you (with voucher/reference specimens), but would like to retain some of the material for future description or work. By far the most interesting record was for the *Skutzia* specimens; this taxon is known only from Vancouver Island, Canada and the Amazon! Your specimens may represent a new species or a variant of the Canadian species.

The rate of \$12.50 per vial for larval and/or pupal specimens (with fewer than about 12 specimens/vial) works fine, but samples with several adult taxa took an inordinate amount of time to complete. Accordingly, I would like to change the rate for adult material vials to \$25.00/vial with 4 or fewer taxa; each additional taxon would be an additional \$15.00. Please let me know if this arrangement is satisfactory. I look forward to seeing more of this material! (I'll be out of my lab until 28 December.)

Sincerely,

Dr. J.H. Epler
enc.

UNITED STATES
DEPARTMENT OF THE INTERIOR
REQUISITION

Page _____ of _____
Requisition No. _____
Date 16 June 1997

INSTRUCTIONS - Prepare in single space typing. Use double space between items. Fill out top of requisition completely, showing complete shipping instructions and appropriation if different from that to which requisition is chargeable.

To <u>Procurement</u>	Bureau/Office <u>NPS</u>
	FTS Phone No. (include area code) _____ FTS Fax No. (include area code) _____
Appropriation/Allotment No. <u>5471-2600-NIT</u>	Charge shipping costs to <u>UA</u>
Vendor <u>Dr. John H. Epler</u> <u>461 Tiger Hammock Road</u> <u>Crawfordville, FL 32327</u> <u>904-926-3200</u>	Deliver to <u>Superintendent</u> <u>GRC</u>

ITEM OR FORM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	Identification of adults, larval + pupae of Chironomidae; return reference collection to Park				
	Rates:				
	\$25/ural of 2 or fewer taxa				
	\$20/additional taxon				
	\$20/ural of larval/pupal specimens				
	Shipping \$20				
	Total NTE \$2000.00				
					\$20.00
					1980.00
					<u>\$2000.00</u>

TO BE COMPLETED BY FISCAL AUTHORITY ONLY

FUND CERTIFICATION: Funds in the amounts shown are available and chargeable to the cost authorities shown above.

Signature _____	Title _____	Date _____
Requisitioned by (Signature) <u>[Signature]</u>	Title <u>Research Aquatic Biologist</u>	Date <u>16 June 97</u>
Approved by (Signature) <u>[Signature]</u>	Title <u>Asst. Dir. M. Coordinator</u>	Date <u>18 June 97</u>
Bureau Officer (Signature) <u>[Signature]</u>	Title <u>Chf. Res. Mgt. & Sci.</u>	Date <u>6/19/97</u>

UNITED STATES
DEPARTMENT OF THE INTERIOR

Page _____ of _____

REQUISITION

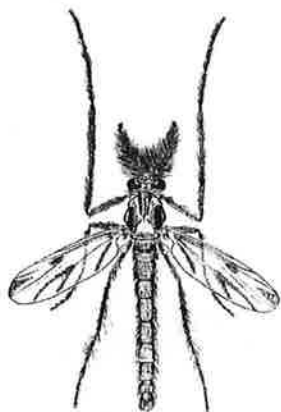
9049263700 To Procurement		PXA2C02 Bureau/Office NPS	Requisition No. UP-179-92 Date 1 Sep+1992
Appropriation/Allotment No. 5472-1001-184 (9216) 5472-1100-182 (1750.00)		Charge shipping costs to BEST Way	
Vendor Dr. J. H. Epler Rt. 3 Box 5485 Crawfordville, FL 32327		Deliver to Superintendent GRSM	

ITEM OR FORM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	Identification of adults, larvae, and pupae of Chironomidae from Blue Ridge Parkway and Great Smoky Mountains National Park; return reference collection to park.				
	① Vials of larvae + pupae	\$12.50	ea		
	② Vials of adults	\$17.50	ea		
	③ Vials of mixed life history stages	\$15.00	ea		
	Total NTE				\$966.00

To Be Completed by Fiscal Authority Only

FUND CERTIFICATION: Funds in the amounts shown are available and chargeable to the cost authorities shown above.

Signature	Date	Approved by (Signature)	Date
		Charles R. Berlan	1 Sep+92
Title		Title	
		Research Aquatic Biologist	
Requisitioned by (Signature)	Date	Bureau Officer (Signature)	Date
Title		Title	



John H. Epler, Ph.D.

Systematic Entomologist

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20 May 1997

Dr. Charles R. Parker
National Biological Survey
Great Smoky Mountains National Park Field Station
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Chuck:

Enclosed is your last batch of chironomid specimens that were sent to me February 1996. I've enclosed vials and slides made from that material. I have retained some slides of some of the taxa. These retained specimens are mostly new taxa that will eventually be described.

I've also enclosed updated species lists for the material identified in this last batch, and for the total species list. Also included is an updated page 4 from the last report that lists the correct taxa for (my) sample number P96-49 (I already informed you of this change via e-mail on 30 March 1997). Please let me know if you have any questions!

Thanks again for your patience!

Sincerely,

Dr. J.H. Epler

Total Species List for Great Smoky Mountains National Park Material
(through March 1997)

Oligochaeta

Naididae

Nais communis Piguet

Insecta - Collembola

Insecta - Homoptera

Cicadellidae

Insecta - Psocoptera

Insecta - Plecoptera

Insecta - Trichoptera

Uenoidae

Neophylax sp.

Insecta - Diptera

Tipulidae

Hexatoma sp.

Limonia sp.

Tipula ? sp.

Ceratopogonidae

Dasyhelea sp.

Chaoboridae

Chaoborus sp.

Dixidae

Dixa sp.

Dixella sp.

Thaumaleidae

Thaumalea sp.

Ephydriidae

Sciaridae

Phoridae

Chironomidae

Podonominae

Boreochlus persimilis (Johannsen)

Tanypodinae

Ablabesmyia mallochi (Walley).

Apsectrotanypus sp.

Brundiniella eumorpha (Sublette)

Conchapelopia sp.

Hudsoniomyia karelena Roback

Krenopelopia sp.

Larsia sp.

Macropelopia sp.

Macropelopia ? sp

Meropelopia americana (Fittkau)

Meropelopia sp.

Natarsia ? sp.

Rheopelopia sp. 3 Roback

Trissopelopia ? sp.

Zavreliomyia sp.

Diamesinae

Diamesa sp.

Pagastia sp.

Prodiamesinae

Prodiamesa olivacea (Meigen)

Orthoclaadiinae

Antillocladius sp. nov. nr. *pluspilalus* Sæther

Brillia flavifrons (Johannsen)

Brillia flavifrons (Johannsen) group sp.

Brillia parva Johannsen

Bryophaenocladus flavoscutellatus (Malloch)

Bryophaenocladus nr. *fumosinus* (Curran)

Chaetocladus piger (Goetghebuer)

Chaetocladus sp.

Chasmatonotus unimaculatus Loew

Corynoneura lobata Edwards

Corynoneura "scutellata Winnertz group" sp.

Corynoneura sp.

Cricotopus nr. *fuscus* (Kieffer)

Cricotopus sp. 2 Epler

Cricotopus/Orthocladus sp.

Doithrix parvilliosa Sæther & Sublette

Doithrix villosa Sæther & Sublette

Epoicocladus sp.

Eukiefferiella claripennis (Lundbeck) group sp.

Eukiefferiella gracei (Edwards) group sp.

Eukiefferiella brevinervis (Malloch)

Eukiefferiella cf. *devonica* (Edwards)

Eukiefferiella sp.

Euryhopsis sp. 1 Epler

Georthocladus fimbriosus Sæther & Sublette

Gymnometriocnemus brumalis (Edwards)

Gymnometriocnemus subnudus (Edwards)

Gymnometriocnemus sp. 1 Epler

Heleniella hirta Sæther

Heleniella parva Sæther

Heleniella sp.

Heterotrissocladus marcidus (Walker) group sp.

Heterotrissocladus marcidus (Walker)

Krenosmittia sp.

Limnophyes carolinensis Sæther

Limnophyes minimus (Meigen)

Limnophyes natalensis Kieffer

Limnophyes cf. *pilicistulus* Sæther

Limnophyes sp. 1 Epler

Limnophyes sp.

Lipuroetriocnemus vixlobatus Sæther

Mesocricotopus sp. nov.

Mesosmittia sp.

Metriocnemus eurynotus (Holmgren) (= *obscuripes* (Holmgren) on previous list)

Nanocladus cf. *rectinervis* (Kieffer)

Nanocladus sp.

Orthocladus (*Eudactylocladus*) sp.

Orthocladus (*Orthocladus*) *dentifer* Brundin ?

Orthocladus (*O.*) cf. *dorenius* (Roback)

Orthocladus (*O.*) cf. *hellenthali* Sponis

Orthocladius (O.) cf. nigrinus Edwards
Orthocladius (O.) sp.
Orthocladius (Symposiocladius) lignicola Kieffer
Parachaetocladius abnobaeus (Wülker)
Parachaetocladius cf. abnobaeus (Wülker)
Parachaetocladius sp.
Paracricotopus millrockensis Caldwell
Paracricotopus sp.
Parametriocnemus hamatus (Johannsen)
Parametriocnemus cf. lundbeckii (Johannsen)
Parametriocnemus sp. F Epler
Parametriocnemus sp. 1 Epler
Parametriocnemus sp.
Parasmittia cf. carinata Strenzke
Psectrocladius sp.
Pseudorthocladius (Pseudorthocladius) morsei Sæther
Pseudorthocladius (Ps.) rectangilobus Caspers & Siebert (= *virgatus* Sæther & Sublette)
Pseudorthocladius (Ps.) tricanthus Sæther
Pseudorthocladius (Lordella) sp.
Pseudosmittia cf. forcipata (Goetghebuer)
Pseudosmittia ? sp.
Psilometriocnemus triannulatus Sæther
Rheocricotopus cf. eminellobus Sæther
Rheocricotopus tuberculatus Caldwell
Smittia sp. nov
Smittia sp.
Stilocladius clinopecten Sæther
Synorthocladius sp.
Thienemanniella sp.
Tvetenia "bavarica group" sp.
Tvetenia "discoloripes group" sp. 2 Epler
Tvetenia sp.
Xylotopus par (Coquillett)
Orthoclaadiinae genus I sp. 1 Epler
Orthoclaadiinae genus I sp. 2 Epler
Orthoclaadiinae genus II Epler
Orthoclaadiinae genus G Epler

Chironominae

Chironomini

Chironomus sp.
Cryptochironomus fulvus (Johannsen)
Einfeldia cf. natchitocheae (Sublette)
Microtendipes caelum Townes
Microtendipes cf. pedellus (De Geer)
Microtendipes sp. 1 Epler
Microtendipes sp. 2 Epler
Polypedilum albicorne (Meigen)
Polypedilum artifer (Curran)
Polypedilum aviceps Townes
Polypedilum fallax (Johannsen)
Polypedilum scalaenum (Schränk) group sp.
Polypedilum scalaenum (Schränk)
Polypedilum simulans Townes

Polypedilum trigonus Townes
Polypedilum trigonus Townes ?
Polypedilum sp.
Stenochironomus woodi Borkent
Tribelos jucundum (Walker)
Xestochironomus ? sp.

Tanytarsini

Constempellina sp.
Micropsectra dives (Johannsen) (= *Micropsectra* sp. 3)
Micropsectra sp. 1
Micropsectra sp. 4
Micropsectra sp. 5
Micropsectra sp. 6
Micropsectra sp.
Parapsectra ? sp. 1 Epler
Rheotanytarsus sp.
Skutzia sp. nov.?
Stempellinella cf. *leptocelloides* (Webb)
Stempellinella sp.
Tanytarsus sp.
Tanytarsus cf. *brundini* Lindeberg
Tanytarsus cf. *buckleyi* Sublette
Tanytarsus sp. 7 Epler
Zavrelia sp. nov.
Zavrelia sp.

Identifications of Great Smoky Mountains National Park material collected in 1995 (samples P96-1 - P96-59)

(A = adult; P = pupa; L = larva)

J.H. Epler March 1997

P96-1		1 <i>Rheocricotopus tuberculatus</i>	A
TN:Sevier Co., GRSM, sweeping vegetation along		1 <i>Polypedilum artifer</i>	A
Shutts Prong, I&M Site 1, 980 m, 15 August 1995, H		6 female Orthocladiinae	A
Soehn, G Salansky		1 female Chironomini	A
1 <i>Tribelos jucundum</i>	A		
P96-2		P96-8	
NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,		NC:Haywood Co., GRSM, at light, Palmer Creek, 841	
Noland Watershed, 1727m, 28 Sept 93, G Salansky		m, 13 IX 95, G Salansky, H Soehn	
1 <i>Rheocricotopus</i> sp.	A	1 <i>Corynoneura</i> sp.	A
3 female Orthocladiinae	A	1 <i>Orthocladus</i> (O.) sp.	A
P96-3		201 <i>Parametriocnemus</i> cf. <i>lundbeckii</i>	A
NC:Haywood Co., GRSM, at light, Palmer Creek, 841		20 <i>Synorthocladus</i> sp.	A
m 13 IX 95, G Salansky, H Soehn		4 female Orthocladiinae	A
1 <i>Corynoneura</i> sp.	A	P96-9	
1 <i>Eukiefferiella brevinervis</i>	A	TN:Sevier Co., GRSM, Rock Creek Site 2 I&M, 1 June	
2 <i>Rheocricotopus tuberculatus</i>	A	94, G Salansky, J Butcher	
5 <i>Thienemanniella</i> sp.	A	1 male Tanypodinae sp. (damaged)	A
2 <i>Stempellinella</i> cf. <i>leptocelloides</i>	A	1 female Tanytarsini	A
1 female Tanypodinae	A	P96-10	
1 female Orthocladiinae	A	NC:Haywood Co., GRSM, at light, Palmer Creek, 841	
P96-4		m 13 IX 95, G Salansky, H Soehn	
NC:Swain Co., GRSM, Raven Fork I&M Site 9, Sweep		2 <i>Chaoborus</i> sp.	A
Net, 10 July 1995, H Soehn, G Salansky		2 <i>Ablabesmyia</i> sp.	A
1 Ceratopogonidae	A	P96-11	
1 <i>Eukiefferiella</i> cf. <i>devonica</i>	A	NC:Swain Co., GRSM, emergence trap, Noland Ck	
1 <i>Polypedilum aviceps</i>	A	above flumes, 6 June 1995, 1700m, GK Salansky	
1 <i>Polypedilum fallax</i>	A	1 Tipulidae sp	A
1 <i>Stempellinella</i> cf. <i>leptocelloides</i>	A	13 <i>Microtendipes</i> cf. <i>pedellus</i>	A
1 female Chironomini	A	1 <i>Micropsectra dives</i>	A
7 female Tanytarsini	A	1 <i>Micropsectra</i> sp. 4	A
P96-5		3 female Orthocladiinae	A
Defeat Creek, Site 1, 23 Aug 95		4 female Tanytarsini	A
2 <i>Brillia flavifrons</i> grp. sp.	A	P96-12	
1 female Tanytarsini	A	TN:Sevier Co., GRSMNP, Twin Creeks area at Uplands	
P96-6		Field Research Lab, 1 June 1995, 1920 ft. H. Soehn	
Bucks Fork, 8-29-86, S. Noan		2 <i>Dixa</i> sp.	A
6 female Chironomini	A	1 <i>Ablabesmyia mallochi</i>	A
P96-7		1 <i>Polypedilum fallax</i>	A
NC:Swain Co., GRSM, emergence trap, Noland Ck		1 female Orthocladiinae	A
above flumes, 30 Aug - 6 Sept 1995, CR Parker		1 female Tanytarsini	A
4 <i>Brundiniella eumorpha</i>	A		
1 <i>Limnophyes minimus</i>	A		
3 <i>Parametriocnemus</i> sp. 1	A		
60 <i>Parametriocnemus</i> cf. <i>lundbeckii</i>	A		

P96-13

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Watershed, 1727m, 19 Oct 93, G Salansky

1 <i>Corynoneura</i> sp.	A
3 <i>Tvetenia</i> sp.	A,P
13 female Orthocladiinae	A

P96-14

TN:Blount Co., Starkey Ck, 15 June 1994, GS/JB

2 <i>Chasmatonotus unimaculatus</i>	A
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P96-15

NC:Haywood Co., GRSM, at light, Palmer Creek, 841
m 13 IX 95, G Salansky, H Soehn

2 <i>Tribelos jucundum</i>	A
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P96-16

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Watershed, 1727m, 26 Oct 93, G Salansky

1 Orthocladiinae genus II	A
91 female Orthocladiinae	A

P96-17

NC:Swain Co., GRSM, emergence trap, Noland Ck
above flumes, 22-29 May 1995, G Salansky, H Soehn

1 <i>Neophylax</i> sp.	A
5 <i>Microtendipes</i> sp. 1	A
1 <i>Microsectra</i> sp. 5	A
1 <i>Zavrelia</i> sp.	A

P96-18

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Watershed, 1727m, 10 Aug 93, G Salansky

1 <i>Parametriocnemus</i> cf. <i>lundbeckii</i>	A
1 <i>Tvetenia</i> "bavarica grp." sp.	L
1 female Orthocladiinae	A
1 female Chironominae	A

P96-19

TN:Sevier Co., GRSM, moss & rock of seep along
Bullhead Trl, W side Balsam Pt, 1509m, 14 Sept 1995,
K Langdon

1 <i>Limnophyes</i> sp.	P
1 <i>Constempellina</i> sp.	L
1 <i>Tanytarsus</i> sp.	L

P96-20

NC:Swain Co., GSMNP, Clingmans Creek at
Pumphouse, 28 April 87

1 <i>Heterotrissocladius marcidus</i> grp sp.	L
2 <i>Tribelos jucundum</i>	L

P96-21

NC:Haywood Co., GRSM, light trap, Cataloochee Ck
behind bunkhouse, 14 Sept 1995, 786m, H Soehn, S
McAfee

1 Cicadellidae sp.	A
1 Psocoptera sp.	A
2 Ceratopogonidae sp.	A
24 Sciaridae sp.	A
3 <i>Chaoborus</i> sp.	A
2 Phoridae sp.	A
1 <i>Corynoneura</i> sp.	A
1 <i>Eukiefferiella brevinervis</i>	A
1 <i>Heterotrissocladius marcidus</i>	A
1 <i>Mesocricotopus</i> sp. n.	A
26 <i>Parametriocnemus</i> cf. <i>lundbeckii</i>	A
1 <i>Psilometriocnemus triannulatus</i>	A
1 <i>Rheocricotopus tuberculatus</i>	A
20 <i>Synorthocladius</i> sp.	A
5 <i>Thienemanniella</i> sp.	A
1 <i>Einfeldia</i> cf. <i>natchitochaeae</i>	A
~100 <i>Microtendipes caelum</i>	A
4 <i>Polypedilum trigonus</i>	A
1 <i>Polypedilum scalaenum</i>	A
25 <i>Polypedilum</i> sp.	A
~100 <i>Microsectra</i> sp. 5	A
~100 <i>Tanytarsus</i> cf. <i>brundini</i>	A
~100 <i>Tanytarsus</i> cf. <i>buckleyi</i>	A
13 female Orthocladiinae	A

P96-22

NC:Swain Co., GSMNP, Noland Cr, Emergence Trap, 4
April 95, G Salansky

1 <i>Mesosmittia</i> sp.	A
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P96-23

NC:Haywood Co., GRSM, at light, Palmer Creek, 841
m, 13 IX 95, G Salansky, H Soehn

1 <i>Cricotopus</i> sp. 2	A
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P96-24

NC:Swain Co., GRSM, Noland Creek near flumes on
Pumphouse Road, 1695m, 10 May 1995, G Salansky

1 <i>Georthocladius fimbriosus</i>	A
1 <i>Limnophyes carolinensis</i>	A
1 female Tanytarsini	A

P96-25

NC:Swain Co., GRSM, emergence trap, Noland Ck
above flumes, 30 Aug - 6Sept 1995, CR Parker

6 <i>Microsectra</i> sp. 4	A
28 <i>Microsectra</i> sp. 5	A

P96-26

NC:Swain Co., GRSM, MG002, 200m below Pecks Corner shelter, along A.T., 4 Aut 88, 1591m D Pipes, E Hahn

1 *Meropelopia* sp. L

P96-27

NC:Swain Co., GRSM, emergence trap, Noland Ck above flumes, 13 June 1995, 1700m, GK Salansky

1 *Doithrix parvilloso* A

1 *Gymnometriocnemus* sp. 1 A

1 *Microtendipes* sp. 1 A

2 *Micropsectra* sp. 4 A

2 female Tanytarsini A

P96-28

NC:Swain Co., GRSM, Noland Creek Drift Sample, 1695m, 6 Jan 1993, CE Noseworthy

1 *Brillia parva* L

P96-29

NC:Swain Co., GRSM, emergence trap, Noland Ck above flumes, 1727m, 6-13 Sept 1995, CR Parker

1 *Brillia parva* A

1 *Doithrix villosa* A

2 *Heleniella parva* A

1 *Orthocladus* sp. A

4 *Parametriocnemus hamatus* A

6 *Micropsectra dives* A

7 female Orthoclaadiinae A

5 female Tanytarsini A

P96-30

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample, Noland Watershed, 1727m, 22 Dec 92, G Salansky

1 Plecoptera sp. L

1 *Brundiniella eumorpha* L

P96-31

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample, Noland Watershed, 1727m, 28 Feb 94, G Salansky

100+ Collembola (at least 3 genera)

1 Plecoptera sp. L

1 *Stempellinella* sp. L

P96-32

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample, Noland Watershed, 1727m, 24 Nov 92, G Salansky

1 *Chaetocladius* sp. A

P96-33

NC:Yancy Co., BLRI Hemphill Springs MP353.5 R. side of road going N. 3 Dec 93, Elv. 4600ft., G Salansky, P Flaherty

2 *Rheotanytarsus* sp. L

P96-34

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample, Noland Watershed, 1727m, 9 Nov 93, G Salansky

1 *Tvetenia* sp. P

2 female Orthoclaadiinae A

P96-35

NC:Swain Co., GRSM, Noland Creek near flumes on Pumphouse Road, 1695m, 8 April 1992, CE Noseworthy

1 *Micropsectra dives* A

P96-36

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample, Noland Ck Watershed, 1727m, 24 Aug 93, G Salansky & H Soehn

1 *Brillia parva* L

P96-37

NC:Swain Co., GRSM confl. Forney & Jonas Cks cmpst 70, at light, 2 May 1994, G. Salansky, J Butcher

1 *Microtendipes* sp. A

P96-38

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample, Noland Watershed, 1727m, 6 Dec 93, G Salansky

1 *Brundiniella eumorpha* L

P96-39

NC:Haywood Co., GRSM at light Palmer Creek, 841 m, 13 IX 95, G Salansky, H Soehn

1 *Polypedilum scalaenum* A

P96-40

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample, Noland Watershed, 1727m, 13 Oct 93, G Salansky

1 *Chaetocladius piger* A

P96-41

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample, Noland Watershed, 1727m, 20 April 93, G Salansky

1 *Stempellinella* sp. L

P96-42

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Watershed, 1727m, 27 April 93, G Salansky

2 <i>Parachaetocladius abnobaesus</i>	P
2 female Orthoclaadiinae	A

P96-43

TN:Sevier Co., GRSM, sweeping riparian vegetation,
Silers Ck, 1036m, 15 June 1995, G Salansky, H Soehn

1 <i>Meropelopia americana</i>	A
1 <i>Xylotopus par</i>	A
1 <i>Xestochironomus</i> ? sp.	A
1 <i>Micropsectra</i> sp. 4	A
1 <i>Parapsectra</i> ? sp. 1	A
2 female Chironomini	A

P96-44

NC:Haywood Co., GRSM at light Palmer Creek, 841 m,
13 IX 95, G Salansky, H Soehn

1 <i>Polypedilum albicorne</i>	A
1 female Orthoclaadiinae	A

P96-45

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Watershed, 1727m, 1 June 93, G Salansky

2 <i>Heleniella hirta</i>	A
1 <i>Pseudosmittia forcipata</i>	A
4 female Orthoclaadiinae	A

P96-46

NC:Swain Co., GRSM, Left Fork Deep Ck., 3500 ft. 8
April 1993, G. Salansky

2 <i>Tvetenia "discoloripes" grp.</i> sp. 2	L
3 <i>Rheotanytarsus</i> sp.	L

P96-47

NC:Haywood Co., GRSM at light Palmer Creek, 841 m,
13 IX 95, G Salansky, H Soehn

3 <i>Cryptochironomus fulvus</i>	A
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P96-48

NC:Swain Co., GRSM, emergence trap, Noland Ck
above flumes, 1727m, 6-13 Sept 1995, CR Parker

2 <i>Brundiniella eumorpha</i>	A
7 <i>Micropsectra dives</i>	A
32 female Tanytarsini	A

P96-49

NC:Haywood Co., GRSM at light Palmer Creek, 841 m,
13 IX 95, G Salansky, H Soehn

1 <i>Brundiniella eumorpha</i>	A
1 <i>Orthoclaadius</i> cf. <i>dorenius</i>	A
1 <i>Microtendipes</i> sp. 2	A

8 <i>Polypedilum aviceps</i>	A
9 <i>Micropsectra</i> sp. 5	A
1 <i>Stempellinella</i> cf. <i>leptocelloides</i>	A
13 <i>Tanytarsus</i> cf. <i>brundini</i>	A
1 <i>Tanytarsus</i> sp. 7	A
1 female Tanypodinae	A
1 female Chironomini	A
100+ female Tanytarsini	A

P96-50

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Watershed, 1727m, 31 Aug 93, G Salansky

1 <i>Brillia parva</i>	L
7 <i>Orthoclaadius</i> cf. <i>nigritus</i>	A
1 <i>Tvetenia</i> sp.	L
1 female Chironomini	A

P96-51

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Watershed, 1727m, 15 June 93, G Salansky

1 <i>Doithrix parvivillosa</i>	A
1 <i>Limnophyes minimus</i>	A
1 <i>Parametriocnemus</i> cf. <i>lundbeckii</i>	A
2 <i>Pseudosmittia forcipata</i>	A
2 <i>Psilometriocnemus triannulatus</i>	A
1 <i>Micropsectra</i> sp. 5	A
23 female Orthoclaadiinae	A
1 female Tanytarsini	A

P96-52

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Watershed, 1727m, 20 April 93, G Salansky

1 <i>Brillia parva</i>	A
1 <i>Heleniella</i> sp.	P
1 <i>Orthoclaadius</i> (S.) <i>lignicola</i>	A
1 <i>Parametriocnemus</i> sp.	L
2 female Tanytarsini	A

P96-53

NC:Haywood Co., GSMNP, Lost Bottom upper falls, 18
Nov 92, GS/HS

3 <i>Meropelopia</i> sp.	L
2 <i>Eukiefferiella</i> sp.	L
13 <i>Parachaetocladius</i> sp.	L
1 <i>Parametriocnemus</i> sp.	L
3 <i>Tvetenia "bavarica" grp.</i> sp.	L
1 <i>Polypedilum fallax</i>	L
1 <i>Micropsectra</i> sp.	L

P96-54

NC:Swain Co., GRSM, Bog at Campsite 50, 7 June 94,
G Salansky, J. Butcher

1	<i>Parachaetocladius</i> sp.	L
1	<i>Tribelos jucundum</i>	L
3	<i>Micropsectra</i> sp.	L

P96-55

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Watershed, 1727m, 17 Aug 93, G Salansky

7	<i>Brundiniella eumorpha</i>	L,P
5	<i>Meropelopia</i> sp.	L
4	<i>Brillia parva</i>	L
1	<i>Limnophyes</i> sp.	L
2	<i>Tvetenia "bavarica grp."</i> sp.	L

P96-56

NC:Swain Co. GSMNP boggy areas along Big Cove
Road; 291500, 3931900; 616 meters, 6 February 1995,
CR Parker

1	<i>Brundiniella eumorpha</i>	L
1	<i>Larsia</i> sp.	L
1	<i>Prodiamesa olivacea</i>	L
1	<i>Corynoneura</i> sp.	L
3	<i>Epoicocladius</i> sp.	L
1	<i>Chironomus</i> sp.	L

P96-57

NC:Swain Co., GRSM, Noland Ck 24hr Drift Sample,
Noland Ck Watershed, 1727m, 3 Aug 93, G Salansky &
H Soehn

4	<i>Brundiniella eumorpha</i>	L,P
2	<i>Brillia parva</i>	L
1	<i>Parametriocnemus</i> sp.	L

P96-58

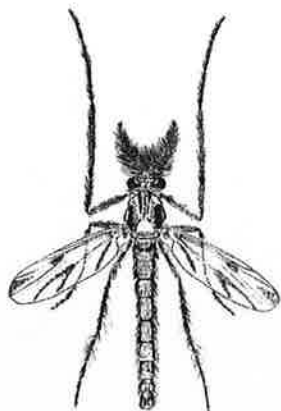
Cased chironomids, det CR Parker , 89005, ML001,
3O-V-89

1	<i>Nanocladius</i> cf. <i>rectinervis</i>	P
5	<i>Parametriocnemus</i> sp.	L

P96-59

NC:Swain Co., GRSM, Chastine Creek, Bog at
Campsite #50, 15 June 94, H Soehn, G Salansky

1	<i>Brundiniella eumorpha</i>	L
1	<i>Trissopelopia</i> ? sp.	L
1	<i>Zavreliomyia</i> sp.	L
7	<i>Parachaetocladius</i> sp.	L
4	<i>Tanytarsus</i> sp.	L



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10 March 1997

Dr. Charles R. Parker
National Biological Survey
Great Smoky Mountains National Park Field Station
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Chuck:

Enclosed are the data from the last batch of chironomid specimens sent February 1996. I've included a sample by sample count of taxa that includes non-chironomid organisms; I basically just eye-balled these but made a note of their occurrence, in case you wish to send them on to someone else.

I'll return the specimens and taxonomic notes on interesting taxa when the slides have dried and I've produced labels for them

PLEASE note that my address has changed; the Purchase Order has my old address on it. The post office is no longer forwarding mail sent to the old address!

Thanks again for your patience!

Sincerely,

Dr. J.H. Epler

Species List for Great Smoky Mountains National Park Material
(collected 1995)

Insecta - Collembola

Insecta - Homoptera

Cicadellidae

Insecta - Psocoptera

Insecta - Plecoptera

Insecta - Trichoptera

Uenoidae

Neophylax sp.

Insecta - Diptera

Tipulidae

Ceratopogonidae

Chaoboridae

Chaoborus sp

Dixidae

Dixa sp.

Ephydriidae

Sciaridae

Phoridae

Chironomidae

Tanypodinae

Ablabesmyia mallochii (Walley).

Brundiniella eumorpha (Sublette)

Larsia sp.

Meropelopia americana (Fittkau)

Meropelopia sp.

Trissopelopia ? sp.

Zavrelimyia sp.

Prodiamesinae

Prodiamesa olivacea (Meigen)

Orthoclaadiinae

Brillia flavifrons (Johannsen) group sp.

Brillia parva Johannsen

Chaetocladius piger (Goetghebuer)

Chaetocladius sp.

Chasmatonotus unimaculatus Loew

Corynoneura sp.

Cricotopus sp. 2 Epler

Doithrix parvivillosa Sæther & Sublette

Doithrix villosa Sæther & Sublette

Epoicocladius sp.

Eukiefferiella brevinervis (Malloch)

Eukiefferiella cf. *devonica* (Edwards)

Eukiefferiella sp.

Georthocladus fimbriosus Sæther & Sublette

Gymnometriocnemus sp. 1 Epler

Heleniella hirta Sæther

Heleniella parva Sæther

Heleniella sp.

Heterotrissocladius marcidus (Walker) group sp.

Heterotrissocladius marcidus (Walker)

Limnophyes carolinensis Sæther

Limnophyes minimus (Meigen)
Limnophyes sp.
Mesocricotopus sp. nov.
Mesosmittia sp.
Nanocladius cf. *rectinervis* (Kieffer)
Orthocladius (*O.*) cf. *dorenius* (Roback)
Orthocladius (*O.*) cf. *nigritus* Edwards
Orthocladius (*Symposiocladius*) *lignicola* Kieffer
Parachaetocladius abnobaesus (Wülker)
Parachaetocladius sp.
Parametriocnemus hamatus (Johannsen)
Parametriocnemus cf. *lundbeckii* (Johannsen)
Parametriocnemus sp. 1 Epler
Parametriocnemus sp.
Pseudosmittia cf. *forcipata* (Goetghebuer)
Psilometriocnemus triannulatus Sæther
Rheocricotopus tuberculatus Caldwell
Rheocricotopus sp.
Synorthocladius sp.
Thienemanniella sp.
Tvetenia "bavarica group" sp.
Tvetenia "discoloripes group" sp. 2 Epler
Tvetenia sp.
Xylotopus par (Coquillett)
Orthocladiinae genus II Epler

Chironominae

Chironomini

Chironomus sp.
Cryptochironomus fulvus (Johannsen)
Einfeldia cf. *natchitochaeae* (Sublette)
Microtendipes caelum Townes
Microtendipes cf. *pedellus* (De Geer)
Microtendipes sp. 1 Epler
Microtendipes sp. 2 Epler
Polypedilum albicorne (Meigen)
Polypedilum artifer (Curran)
Polypedilum aviceps Townes
Polypedilum fallax (Johannsen)
Polypedilum scalaenum (Schränk)
Polypedilum trigonus Townes
Polypedilum sp.
Tribelos jucundum (Walker)
Xestochironomus ? sp.

Tanytarsini

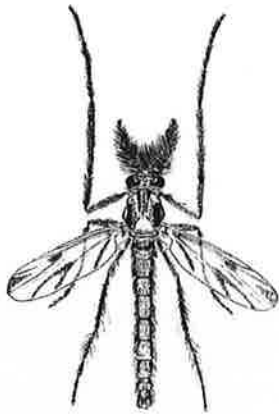
Constempellina sp.
Micropsectra dives (Johannsen)
Micropsectra sp. 4
Micropsectra sp. 5
Micropsectra sp.
Parapsectra ? sp. 1 Epler
Rheotanytarsus sp.
Stempellinella cf. *leptocelloides* (Webb)
Stempellinella sp.
Tanytarsus sp.

Tanytarsus cf. *brundini* Lindeberg

Tanytarsus cf. *buckleyi* Sublette

Tanytarsus sp. 7 Epler

Zavrelia sp.



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Quality Assurance/Quality Control
Specializing in Chironomidae

(904) 926 3700
(904) 926 8695 FAX
E-mail: johnneplr@freenet.scri.fsu.edu

7 March 1996

Dr. Charles R. Parker
National Biological Survey
Great Smoky Mountains National Park Field Station
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Chuck:

I received the chironomid specimens in good condition. I've got just a few questions.

The last purchase order I have is No. 1443PX546095629, dated 09/05/95, for \$1500. We have not billed anything under this order, so can I assume this is what we have to work with? Is it still valid?

Do you have any preference for which vials I should start with, in case we do run out of funds? I would favor doing all adult material first, because you'll get the best names from such material. How about particular areas?

It will be some time before I can complete these determinations; any problem with that? (Most of my time these days is devoted to writing an identification manual for the water beetles of Florida, which must be completed by September.)

Last, but certainly not least, please note my address change. We're in the same place, but now have a "real street" address (due to new 911 emergency calling system). And also note that somehow, you guys have managed to change my middle initial to "P".

Thanks!

Sincerely,

Dr. J.H. Epler

ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 1

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 09/04/92 2. CONTRACT NO. (If any) 3. ORDER NO. 1443PX5460A2C02 4. REQUISITION/REFERENCE NO. XA2C02

5. ISSUING OFFICE (Address correspondence to)
SUPERINTENDENT
GREAT SMOKY MOUNTAINS NATIONAL PARK
107 PARK HEADQUARTERS ROAD
GATLINBURG, TN 37738

6. SHIP TO: (Consignee and address, ZIP Code)
SAME AS BLOCK 5
M/F UPLANDS LAB/PARKER/UP-179-92
SHIP VIA: BEST WAY

7. TO: CONTRACTOR (Name, address and ZIP Code)
DR. J P EPLER
RT 3 BOX 5485
CRAWFORDVILLE, FL 32327

8. TYPE OF ORDER
☐ A. PURCHASE - Reference your

Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheets, if any, including delivery as indicated. This purchase is negotiated under authority of:

☐ B. DELIVERY - Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

"OBLIGATED"

9. ACCOUNTING AND APPROPRIATION DATA
5472-1100-182-261A 750.00
5472-1001-184-261A 216.00

10. REQUISITIONING OFFICE
C31 UPLANDS/PARKER/UP-179-92

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
☒ SMALL ☐ OTHER THAN SMALL ☐ DIS-ADVANTAGED ☐ WOMEN-OWNED

12. F.O.B. POINT
DESTINATION

14. GOVERNMENT B/L NO.

15. DELIVER TO F.O.B. POINT
ON OR BEFORE (Date)

16. DISCOUNT TERMS

13. PLACE OF INSPECTION AND ACCEPTANCE

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	IDENTIFICATION OF ADULTS, LARVA, AND PUPAE OF CHIRONOMIDAE FROM BLUE RIDGE PARKWAY AND GREAT SMOKY MOUNTAINS NATIONAL PARK; RETURN REFERENCE COLLECTION TO PARK 					

22. UNITED STATES OF AMERICA
BY (Signature)

Levin Brooks

23. NAME (Typed) LEVIN BROOKS, SUPV. CONTRACT SPECIALIST

TITLE: CONTRACTING/ORDERING OFFICER

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1.CONTRACT ID CODE		PAGE OF PAGES	
				1 2	
2.AMENDMENT/MODIFICATION NO.		3.EFFECTIVE DATE		4.REQUISITION/PURCHASE REQ. NO.	
MODIFICATION 142		04/14/93		1443PX5460A2C02	
5.PROJECT NO. (If applicable)		6.ISSUED BY		7.ADMINISTERED BY	
		CODE		CODE	
		+		+	
SUPERINTENDENT GREAT SMOKY MOUNTAINS NATIONAL PARK GATLINBURG, TN 37738				(If other than Item 6)	
				"OBLIGATED"	
8.NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)		(V)		9A.AMENDMENT OF SOLICITATION NO.	
DR. J.P. EPLER RT 3 BOX 5485 CRAWFORDVILLE, FL 32327		+			
				9B.DATED (SEE ITEM 11)	
				10A.MODIFICATION OF CONTRACT/ORDER NO.	
				PXA2C02	
		X		10B.DATED (SEE ITEM 13)	
				09/04/92	
CODE C31		FACILITY CODE 5460			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
[] The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers [] is extended, [] is not extended.					
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:					
(a) By completing Items 8 and 15, and returning __ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12.ACCOUNTING AND APPROPRIATION DATA (If required)					
INCREASE 5472-1001-184-221B 10.00 5472-1100-182-221B 10.00					

Shipping
we had
not
acc'd
for

A

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT | 1.CONTRACT ID CODE

2.AMENDMENT/MODIFICATION NO. | 3.EFFECTIVE DATE | 4.REQUISITION/PURCHASE REQ. NO. | 5.PROJECT NO.
MODIFICATION 142 | 04/14/93 | 1443PX5460A2C02

13.THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS,
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(V) A.THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM
14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
X FAR PART 13

B.THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such
as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO
THE AUTHORITY OF FAR 43.103(b).

C.THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D.OTHER (Specify type of modification and authority)

E.IMPORTANT: Contractor [] is not, [] is required to sign this document and return __ copies
to the issuing office.

14.DESCRPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings,
including solicitation/contract subject matter where feasible.)

INCREASE PURCHASE ORDER TO COVER CURRENT AND ADDITIONAL SHIPPING CHARGES
CHANGE PURCHASE ORDER TO READ ORIGIN VICE DESTINATION

Except as provided herein, all terms and conditions of the document referenced in Item 9A or
10A, as heretofore changed, remains unchanged and in full force and effect.

15A.NAME AND TITLE OF SIGNER (Type or print)

16A.NAME AND TITLE OF CONTRACTING OFFICER

BRENDA SCARBOROUGH PROCURMENT TECHNICIAN

15B.CONTRACTOR/OFFEROR

15C.DATE SIGNED

16B.UNITED STATES OF AMERICA

16C.Date signed

BY

Brenda Scarborough 04/14/93

(Signature of person
authorized to sign)

(Signature of
contracting officer)

NSN 7540-01-152-8070
PREVIOUS EDITION UNUSABLE

30-105

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

NATIONAL PARK SERVICE
2 of 2



John H. Epler, Ph.D.

Rt. 3, Box 5485
Crawfordville, FL 32327

(904) 926-3700

Environmental/Biological Consulting
Macroinvertebrate Identification
Specializing in Chironomidae

INVOICE

INVOICE # GSM 92-01

INVOICE DATE : 8 December 1992

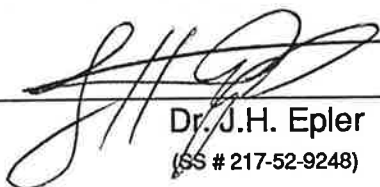
PURCHASE ORDER # 1443PX5460A2C02

TO: Superintendent
Great Smoky Mountains National Park
107 Park Headquarters Road
Gatlinburg, TN 37738

FOR: Identification of adults, larvae and pupae of Chironomidae from Blue Ridge
Parkway and Great Smoky Mountains National Park

37 vials with larvae and/or pupae @ \$12.50/vial	\$462.50
14 vials with adults @ \$17.50/vial	245.00
shipping charges for return of specimens	5.00

TOTAL DUE \$712.50


Dr. J.H. Epler
(SS # 217-52-9248)

TERMS : Net 30 Days

Total Species List for Great Smoky Mountains National Park Material
(February 1994)

Oligochaeta

Naididae

Nais communis Piguet

Insecta - Diptera

Tipulidae

Hexatoma sp.

Limonia sp.

Tipula ? sp.

Ceratopogonidae

Dasyhelea sp.

Dixidae

Dixa sp.

Dixella sp.

Thaumaleidae

Thaumalea sp.

Ephydridae

Sciaridae

Chironomidae

Podonominae

Boreochlus persimilis (Johannsen)

Tanypodinae

Apsectrotanypus sp.

Brundiniella eumorpha (Sublette)

Conchapelopia sp.

Hudsonimyia karelena Roback

Krenopelopia sp.

Macropelopia sp.

Macropelopia ? sp

Meropelopia americana (Fittkau)

Meropelopia sp.

Natarsia ? sp.

Rheopelopia sp. 3 Roback

Zavreliomyia sp.

Diamesinae

Diamesa sp.

Pagastia sp.

Prodiamesinae

Prodiamesa olivacea (Meigen)

Orthoclaadiinae

Antillocladius sp. nov. nr. *pluspilalus* Sæther

Brillia flavifrons (Johannsen)

Brillia flavifrons (Johannsen) group sp.

Brillia parva Johannsen

Bryophaenocladus flavoscutellatus (Malloch)

Bryophaenocladus nr. *fumosinus* (Curran)

Chaetocladus sp.

Corynoneura lobata Edwards

Corynoneura "scutellata Winnertz group" sp.

Corynoneura sp.

Cricotopus nr. *fuscus* (Kieffer)

Cricotopus/Orthocladius sp.
Doithrix parcvillosa Sæther & Sublette
Doithrix villosa Sæther & Sublette
Eukiefferiella claripennis (Lundbeck) group sp.
Eukiefferiella gracei (Edwards) group sp.
Eukiefferiella sp.
Euryhopsis sp. 1 Epler
Gymnometriocnemus brumalis (Edwards)
Gymnometriocnemus subnudus (Edwards)
Gymnometriocnemus sp. 1 Epler
Heleniella parva Sæther
Heleniella sp.
Heterotrissocladius marcidus (Walker) group sp.
Krenosmittia sp.
Limnophyes carolinensis Sæther
Limnophyes minimus (Meigen)
Limnophyes natalensis Kieffer
Limnophyes cf. *pilicistulus* Sæther
Limnophyes sp. 1 Epler
Limnophyes sp.
Lipumetriocnemus vixlobatus Sæther
Metriocnemus obscuripes (Holmgren)
Nanocladius sp.
Orthocladius (Eudactylocladius) sp.
Orthocladius (Orthocladius) dentifer Brundin ?
Orthocladius (O.) cf. *hellenthali* Soponis
Orthocladius (O.) cf. *nigritus* Edwards
Orthocladius (Symposiocladius) lignicola Kieffer
Parachaetocladius cf. *abnobaes* (Wülker)
Parachaetocladius sp.
Paracricotopus millrockensis Caldwell
Paracricotopus sp.
Parametriocnemus cf. *lundbeckii* (Johannsen)
Parametriocnemus sp. F Epler
Parametriocnemus sp.
Parasmittia cf. *carinata* Strenzke
Psectrocladius sp.
Pseudorthocladius (Pseudorthocladius) morsei Sæther
Pseudorthocladius (Ps.) tricanthus Sæther
Pseudorthocladius (Ps.) virgatus Sæther & Sublette
Pseudorthocladius (Lordella) sp.
Pseudosmittia forcipata (Goetghebuer)
Pseudosmittia ? sp.
Psilometriocnemus triannulatus Sæther
Rheocricotopus cf. *eminellobus* Sæther
Rheocricotopus tuberculatus Caldwell
Smittia sp. nov
Smittia sp.
Stilocladius clinopecten Sæther
Synorthocladius sp.
Thienemanniella sp.

Tvetenia "bavarica group" sp.
Tvetenia "discoloripes group" sp. 2 Epler
Tvetenia sp.
Xylotopus par (Coquillett)
Orthoclaadiinae genus I sp. 1 Epler
Orthoclaadiinae genus I sp. 2 Epler
Orthoclaadiinae genus G Epler

Chironominae

Chironomini

Chironomus sp
Microtendipes cf. pedellus (De Geer)
Polypedilum artifer (Curran) ?
Polypedilum fallax (Johannsen)
Polypedilum scalaenum (Schrank) group sp.
Polypedilum simulans Townes
Polypedilum trigonus Townes
Polypedilum trigonus Townes ?
Polypedilum sp.
Stenochironomus woodi Borkent
Tribelos jucundum (Walker)

Tanytarsini

Micropsectra sp. 1
Micropsectra sp. 3
Micropsectra sp. 4
Micropsectra sp. 5
Micropsectra sp. 6
Micropsectra sp.
Rheotanytarsus sp.
Skutzia sp. nov.?
Stempellinella sp.
Tanytarsus sp.
Zavrelia sp. nov.

Species List for Great Smoky Mountains National Park Material
(for material received 1993)

Insecta - Diptera

Ceratopogonidae

Dixidae

Dixa sp.

Ephydriidae

Thaumaleidae

Thaumalea sp.

Chironomidae

Podonominae

Boreochlus persimilis (Johannsen)

Tanypodinae

Brundiniella eumorpha (Sublette)

Conchapelopia sp.

Macropelopia ? sp

Meropelopia sp.

Rheopelopia sp. 3 Roback

Diamesinae

Diamesa sp.

Pagastia sp.

Orthoclaadiinae

Brillia flavifrons (Johannsen) group sp.

Brillia parva Johannsen

Bryophaenocladus flavoscutellatus (Malloch)

Bryophaenocladus nr. *fumosinus* (Curran)

Chaetocladus sp.

Corynoneura lobata Edwards

Corynoneura sp.

Cricotopus/Orthocladus sp.

Doithrix parvilliosa Sæther & Sublette

Doithrix villosa Sæther & Sublette

Eukiefferiella claripennis (Lundbeck) group sp.

Eukiefferiella sp.

Euryhapsis sp. 1 Epler

Gymnometriocnemus brumalis (Edwards)

Gymnometriocnemus subnudus (Edwards)

Gymnometriocnemus sp. 1 Epler

Heleniella parva Sæther

Heterotrissocladius marcidus (Walker) group sp.

Krenosmittia sp.

Limnophyes minimus (Meigen)

Limnophyes natalensis Kieffer

Limnophyes cf. *pilicistulus* Sæther

Limnophyes sp. 1 Epler

Limnophyes sp.

Metriocnemus obscuripes (Holmgren)

Nanocladus sp.

Orthocladus cf. *hellenthali* Söponis

Orthocladus cf. *nigritus* Edwards

Parachaetocladus cf. *abnobaeus* (Wülker)

Parachaetocladus sp.

Orthocladiinae (cont'd)

Paracricotopus millrockensis Caldwell
Paracricotopus sp.
Parametriocnemus cf. *lundbeckii* (Johannsen)
Parametriocnemus sp. F Epler
Parametriocnemus sp.
Parasmitia cf. *carinata* Strenzke
Psectrocladius sp.
Pseudorthocladius virgatus Sæther & Sublette
Pseudorthocladius (*Lordella*) sp.
Pseudosmittia ? sp.
Psilometriocnemus triannulatus Sæther
Rheocricotopus cf. *eminellobus* Sæther
Rheocricotopus tuberculatus Caldwell
Smittia sp.
Stilocladius clinopecten Sæther
Synorthocladius sp.
Thienemanniella sp.
Tvetenia "bavarica group" sp.
Tvetenia "discoloripes group" sp. 2 Epler
Tvetenia sp.
Xylotopus par (Coquillett)
Orthocladiinae genus I sp. 1 Epler
Orthocladiinae genus I sp. 2 Epler
Orthocladiinae genus G Epler

Chironominae

Chironomini

Microtendipes cf. *pedellus* (De Geer)
Polypedilum fallax (Johannsen)
Polypedilum trigonus Townes ?
Polypedilum sp.
Tribelos jucundum (Walker)

Tanytarsini

Micropsectra sp. 3
Micropsectra sp. 4
Micropsectra sp. 5
Micropsectra sp. 6
Micropsectra sp.
Rheotanytarsus sp.
Stempellinella sp.
Tanytarsus sp.

Notes on Great Smoky Mountains National Park Chironomidae material
(J.H. Epler; February 1994)

Specimen identifications qualified by a question mark were usually in poor condition and accurate identification was not possible. Most of these specimens were from drift samples and were usually incomplete and/or decomposed.

Brillia flavifrons (Joh). group sp. - This specimen is most similar to *B. flavifrons* (Joh.), but antennal ratio was significantly out of the species' published range.

Euryhapsis sp. 1 Epler - The genus *Euryhapsis* is recorded mostly from western North America, although Hudson et al. (1990) recorded an unidentified male from North Carolina and larvae from Tennessee. *E. sp. 1* appears to be undescribed.

Gymnometriocnemus sp. 1 Epler - This is apparently an undescribed species.

Limnophyes cf. *pilicistulus* Sæther - The specimens are intermediate between *L. pilicistulus* and *L. recisus* Sæther. Sæther (1990) stated that the two may be synonyms; *L. pilicistulus* would be the senior synonym by page precedence. These intermediate specimens suggest that the two are synonyms. Both "species" were previously known only from Nebraska, South Dakota, Oregon, British Columbia, Manitoba and the Yukon.

Limnophyes sp. 1 Epler - This appears to be a new species.

Orthocladius cf. *hellenthali* Sopenis - Only one specimen of this taxon was found; it had lost its antennae. It keys to *O. hellenthali* in Sopenis (1977) by virtue of its lack of tarsal pseudospurs. The genitalia are similar and it has robust thoracic dorsocentral setae. However, *O. hellenthali* has previously been recorded only from Alaska, California and the Northwest Territories. More material would help (and Sopenis has "retired"!).

Parachaetocladus cf. *abnobaesus* (Wülker) - The genitalia of the two specimens collected are slightly different than those illustrated for *P. abnobaesus*. These specimens may represent a new species, or may be extreme variants of the described species.

Parametriocnemus cf. *lundbeckii* (Joh.) - This taxon has been considered to show much variation, and may be a complex of several species (Sæther 1969). The genus requires revision.

Parametriocnemus sp. F Epler - This apparently is the same taxon (or is closely related to) the Orthocladiinae genus F of Epler (1992). Reared material of two similar species from Costa Rica shows that "Orthocladiinae genus F" is not clearly separable from *Parametriocnemus*, and I now consider genus F to be a member of *Parametriocnemus*.

Parasmittia cf. *carinata* Strenzke - There was only previous record for this genus from North America, a single specimen from Nova Scotia. Without comparative material, I can not be sure your specimens are "true" *P. carinata*. The specimens have lost their antennae.

Tvetenia spp. - Nearctic larvae of this genus were considered to fall into two groups, the *bavarica* and *discoloripes* groups, by Bode (1983). However, Mason (1985) noted that these two groups may not be sustainable when other life stages are taken into consideration. Thus I have used "" "" around the group names.

Orthocladiinae genus I sp. 1 Epler & Orthocladiinae genus I sp. 2 Epler - These adult specimens appear to represent a new genus. The specimens will key to "apparently" *Lipurometriocnemus* in the Holarctic Keys (Wiederholm 1989) for adults, but don't really fit that genus that well. However, they may also represent aberrant species of *Hydrobaenus*.

Orthocladiinae genus G Epler - Two larvae were found. They do not match the diagnoses or descriptions of any known genera, but could represent the larvae of a genus known only from adults.

Literature Cited

- Bode, R.W. 1983. Larvae of North American *Eukiefferiella* and *Tvetenia* (Diptera: Chironomidae). Bull. N.Y. St. Mus. No. 452:1-40.
Epler, J.H. 1992. Identification manual for the larval Chironomidae (Diptera) of Florida. FL Dept. Environ. Reg., Orlando, FL. 302 pp.

- Hudson, P.L., D.R. Lenat, B.A. Caldwell & D. Smith. 1990. Chironomidae of the Southeastern United States: A checklist of species and notes on biology, distribution, and habitat. U.S. Fish Wildl. Ser., Fish. Wildl. Res. 7:1-46.
- Mason, P.G. 1985. The larva of *Tvetenia vitracies* (Sæther) (Diptera: Chironomidae). Proc. Ent. Soc. Wash. 87: 418-420.
- Sæther, O.A. 1969. Some Nearctic Podonominae, Diamesinae, and Orthocladiinae (Diptera: Chironomidae). Bull. Fish. Rs. Bd. Can. 170: 1-154.
- Sæther, O.A. 1990. A review of the genus *Limnophyes* Eaton from the Holarctic and Afrotropical regions (Diptera: Chironomidae, Orthocladiinae). Ent. scand. Suppl. 35:1-139.
- Soponis, A.R. 1977. A revision of the Nearctic species of *Orthocladius* (*Orthocladius*) van der Wulp (Diptera: Chironomidae). Mem. Ent. Soc. Canada 102:1-187.
- Wiederholm, T. (ed.) 1989. Chironomidae of the Holarctic region. Keys and diagnoses. Part 3. Adult males. Ent. scand. Suppl. 34: 1-524.



John H. Epler, Ph.D.

Systematic Entomologist

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(904) 926-8695 FAX

Environmental/Biological Consulting
Macroinvertebrate Identification
Quality Assurance/Quality Control
Specializing in Chironomidae

30 January 1994

Dr. Charles R. Parker
National Biological Survey
Great Smoky Mountains National Park Field Station
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Chuck:

Enclosed you will find the first installment of my report on the identifications for the Chironomidae material sent in October 1993. Of the 52 vials sent, only 47 contained Chironomidae. Some of these 47 vials also contained Collembola, Ceratopogonidae, Dixidae, Ephydriidae, Thaumaleidae and, most often, Sciaridae. I identified the thaumaleids and dixids to genus and ignored the remainder (specimens were returned to vials). All are listed, at least at the family level, in the report.

The final report installment will include the remainder of the identifications, a list of taxa from the current group of samples and a list of all taxa identified by me to date. Please let me know what the new purchase order number will be; I'll send the final report soon after. The specimens (vials and slides) will be returned once the slides are dry enough to travel safely.

As I mentioned over the phone, there were some interesting taxa in these samples, many of which are apparently undescribed. Would NBS supply funding to produce and publish descriptions of these taxa?

Sincerely,

Dr. J.H. Epler

Total Species List for Great Smoky Mountains National Park Material
(February 1994)

Oligochaeta

Naididae

Nais communis Piguet

Insecta - Diptera

Tipulidae

Hexatoma sp.

Limonia sp.

Tipula ? sp.

Ceratopogonidae

Dasyhelea sp.

Dixidae

Dixa sp.

Dixella sp.

Thaumaleidae

Thaumalea sp.

Ephydriidae

Sciaridae

Chironomidae

Podonominae

Boreochlus persimilis (Johannsen)

Tanypodinae

Apsectrotanypus sp.

Brundiniella eumorpha (Sublette)

Conchapelopia sp.

Hudsonimyia karelena Roback

Krenopelopia sp.

Macropelopia sp.

Macropelopia ? sp

Meropelopia americana (Fittkau)

Meropelopia sp.

Natarsia ? sp.

Rheopelopia sp. 3 Roback

Zavrelinyia sp.

Diamesinae

Diamesa sp.

Pagastia sp.

Prodiamesinae

Prodiamesa olivacea (Meigen)

Orthoclaadiinae

Antillocladius sp. nov. nr. *pluspilalus* Sæther

Brillia flavifrons (Johannsen)

Brillia flavifrons (Johannsen) group sp.

Brillia parva Johannsen

Bryophaenocladus flavoscutellatus (Malloch)

Bryophaenocladus nr. *fumosinus* (Curran)

Chaetocladus sp.

Corynoneura lobata Edwards

Corynoneura "scutellata Winnertz group" sp.

Corynoneura sp.

Cricotopus nr. *fuscus* (Kieffer)

Cricotopus/Orthocladus sp.
Doithrix parvilliosa Sæther & Sublette
Doithrix villosa Sæther & Sublette
Eukiefferiella claripennis (Lundbeck) group sp.
Eukiefferiella gracei (Edwards) group sp.
Eukiefferiella sp.
Euryhapsis sp. 1 Epler
Gymnometriocnemus brumalis (Edwards)
Gymnometriocnemus subnudus (Edwards)
Gymnometriocnemus sp. 1 Epler
Heleniella parva Sæther
Heleniella sp.
Heterotrissocladius marcidus (Walker) group sp.
Krenosmittia sp.
Limnophyes carolinensis Sæther
Limnophyes minimus (Meigen)
Limnophyes natalensis Kieffer
Limnophyes cf. *pilicistulus* Sæther
Limnophyes sp. 1 Epler
Limnophyes sp.
Lipurometriocnemus vixlobatus Sæther
Metriocnemus obscuripes (Holmgren)
Nanocladus sp.
Orthocladus (Eudactylocladius) sp.
Orthocladus (Orthocladus) dentifer Brundin ?
Orthocladus (O.) cf. *hellenthali* Sopenis
Orthocladus (O.) cf. *nigritus* Edwards
Orthocladus (Symposiocladius) lignicola Kieffer
Parachaetocladius cf. *abnobaeus* (Wülker)
Parachaetocladius sp.
Paracricotopus millrockensis Caldwell
Paracricotopus sp.
Parametriocnemus cf. *lundbeckii* (Johannsen)
Parametriocnemus sp. F Epler
Parametriocnemus sp.
Parasmittia cf. *carinata* Strenzke
Psectrocladius sp.
Pseudorthocladus (Pseudorthocladus) morsei Sæther
Pseudorthocladus (Ps.) tricanthus Sæther
Pseudorthocladus (Ps.) virgatus Sæther & Sublette
Pseudorthocladus (Lordella) sp.
Pseudosmittia forcipata (Goetghebuer)
Pseudosmittia ? sp.
Psilometriocnemus triannulatus Sæther
Rheocricotopus cf. *eminellobus* Sæther
Rheocricotopus tuberculatus Caldwell
Smittia sp. nov
Smittia sp.
Stilocladius clinopectus Sæther
Synorthocladus sp.
Thienemanniella sp.

Tvetenia "bavarica group" sp.
Tvetenia "discoloripes group" sp. 2 Epler
Tvetenia sp.
Xylotopus par (Coquillett)
Orthoclaadiinae genus I sp. 1 Epler
Orthoclaadiinae genus I sp. 2 Epler
Orthoclaadiinae genus G Epler

Chironominae

Chironomini

Chironomus sp
Microtendipes cf. pedellus (De Geer)
Polypedilum artifer (Curran) ?
Polypedilum fallax (Johannsen)
Polypedilum scalaenum (Schrank) group sp.
Polypedilum simulans Townes
Polypedilum trigonus Townes
Polypedilum trigonus Townes ?
Polypedilum sp.
Stenochironomus woodi Borkent
Tribelos jucundum (Walker)

Tanytarsini

Micropsectra sp. 1
Micropsectra sp. 3
Micropsectra sp. 4
Micropsectra sp. 5
Micropsectra sp. 6
Micropsectra sp.
Rheotanytarsus sp.
Skutzia sp. nov.?
Stempellinella sp.
Tanytarsus sp.
Zavrelia sp. nov.

Identifications of Great Smoky Mountains National Park material (samples P93-1 - P93-47) for Dr. C.R. Parker

(A = adult; P = pupa; L = larva)

J.H. Epler 25 February 1994

P93-1

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 11 Aug 1992, CE Noseworthy

- 3 Sciaridae sp. A
- 1 *Dixa* sp. A (Dixidae)
- 4 *Corynoneura lobata* A
- 1 *Orthocladius* (*Orthocladius*) cf. *nigritus* A
- 2 *Parametriocnemus* cf. *lundbeckii* A (1 gynandromorph)
- 1 *Parametriocnemus* cf. *lundbeckii* P
- 1 *Tvetenia discoloripes* group sp. 2 L
- 1 *Micropsectra* sp. 4 A
- 1 *Micropsectra* sp. 5 A
- 12 female Orthoclaadiinae A

P93-2

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 2-VII-1991, CE Noseworthy

- 2 Sciaridae sp. A
- 4 *Brundiniella eumorpha* L
- 1 *Gymnometriocnemus* sp. 1 A
- 1 *Limnophyes natalensis* A
- 3 *Parametriocnemus* cf. *lundbeckii* A
- 1 *Tvetenia* sp. P
- 3 female Orthoclaadiinae A

P93-3

NC: Swain Co., GRSM, Noland Ck 24hr drift sample, Noland Creek watershed, 1727 m, 25 Aug 1992, G Salansky & H Soehn

- 2 *Brillia parva* L
- 2 *Rheocricotopus* cf. *eminellobus* L
- 1 *Stempellinella* sp. L

P93-4

NC: Swain Co., GRSM, Noland Ck 24hr drift sample, Noland Creek watershed, 1727 m, 25 June 1991, R Noseworthy

- 1 Ceratopogonidae sp. P
- 1 *Brundiniella eumorpha* L
- 2 *Brillia parva* L
- 1 *Metriocnemus obscuripes* L
- 1 *Parametriocnemus* cf. *lundbeckii* L

P93-5

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 21 July 1992, CE Noseworthy

- 4 Sciaridae sp. A
- 1 Ceratopogonidae sp. A

P93-5 cont'd

- 1 *Brundiniella eumorpha* A
- 4 *Corynoneura lobata* A
- 1 *Eukiefferiella* sp. A
- 1 *Paracricotopus millrockensis* A
- 2 *Pseudosmittia* ? sp. A
- 1 *Synorthocladius* sp. P
- 1 *Thienemanniella* sp. L
- 1 *Tanytarsus* sp. A
- 24 female Orthoclaadiinae
- 1 female Chironomini

P93-6

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 16 July 1991, CE Noseworthy

- 2 Sciaridae sp. A
- 4 *Parametriocnemus* cf. *lundbeckii* A
- 14 female Orthoclaadiinae

P93-7

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 8 April 1993, CE Noseworthy

- 1 *Diamesa* sp. A
- 1 *Chaetocladius* sp. P
- 8 *Eukiefferiella claripennis* grp. sp. P
- 3 *Eukiefferiella* sp. A
- 1 *Stilocladius clinoptecten* P
- 2 *Tvetenia* sp. P
- 8 *Tvetenia* sp. A
- 11 *Micropsectra* sp. 4 P

P93-8

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 30 Dec 1991, CE Noseworthy

- 1 *Parachaetocladius* sp. L

P93-9

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 6 Aug 1991, CE Noseworthy

- 1 Ceratopogonidae sp. A
- 3 *Eukiefferiella* sp. A
- 1 *Metriocnemus obscuripes* L
- 4 *Parametriocnemus* cf. *lundbeckii* A
- 1 *Psilometriocnemus triannulatus* A
- 1 *Tvetenia* sp. A
- 8 female Orthoclaadiinae A
- 2 female Tanytarsini A

P93-10

NC: Swain Co., GSMNP, Noland Ck above flumes on Pumphouse Road, 1695 m, 19 May 1993, D Williams, C Leponey

- 1 *Brillia* ? sp. A (female)

P93-11

NC: Swain Co., GRSM, Noland Ck 24hr drift sample, Noland Creek watershed, 1727 m, 7 Jan 1992, R Noseworthy

- 1 *Brillia parva* L
1 *Stempellinella* sp. L

P93-12

NC: Swain Co., GRSM, Noland Ck 24hr drift sample, Noland Creek watershed, 1727 m, 25 Aug 1992, G Salansky & H Soehn

- 2 *Brundiniella eumorpha* P
3 *Heleniella parva* A
11 *Heleniella parva* P
2 *Psilometriocnemus triannulatus* P
1 *Tvetenia* sp. P
12 *Micropsectra* sp. P (mostly ? sp. 4)
4 *Micropsectra* sp. 5 A
2 *Micropsectra* sp. 6 A
1 *Polypedilum trigonus* ? A
1 female Orthocladiinae A
1 female Chironomini A

P93-13

NC: Swain Co., GSMNP, Noland Ck above flumes on Pumphouse Road, 1695 m, 18 May 1993, D Williams, C Leponey

- 1 *Gymnometriocnemus subnudus* A
3 *Parasmittia* cf. *carinata*. A

P93-14

NC: Swain Co., GRSM, Noland Ck 24hr drift sample, Noland Creek watershed, 1727 m, 10 Sep 1991, R Noseworthy

- 1 *Ceratopogonidae* sp. A
1 *Corynoneura* sp. A
2 *Limnophyes minimus* A
3 *Parametriocnemus* cf. *lundbeckii* A
2 *Tvetenia* "discoloripes group" sp. 2 L
34 female Orthocladiinae
2 female Tanytarsini

P93-15

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 3 Sept 1991, CE Noseworthy

- 3 *Ceratopogonidae* sp. A
1 *Brundiniella eumorpha* P

P93-15 cont'd

- 1 *Brundiniella eumorpha* A
1 *Brillia parva* L
1 *Corynoneura* sp. A
1 *Parametriocnemus* cf. *lundbeckii* P
2 *Psilometriocnemus triannulatus* P
8 *Psilometriocnemus triannulatus* A
4 *Psectrocladius* sp. A
3 *Tvetenia* "discoloripes group" sp. 2 L
4 *Micropsectra* sp. P
1 *Micropsectra* sp. 3 A
1 *Micropsectra* sp. 5 A
2 *Micropsectra* sp. A
1 *Stempellinella* sp. P
19 female Orthocladiinae A
3 female Tanytarsini A

P93-16

NC: Swain Co., GRSM, Noland Ck 24hr drift sample, Noland Creek watershed, 1727 m, 30 July 1991, R Noseworthy

- 1 *Parametriocnemus* cf. *lundbeckii* A
1 *Psilometriocnemus triannulatus* A
3 female Orthocladiinae A
1 female Tanytarsini A

P93-17

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 23 July 1991, CE Noseworthy

- 1 *Sciaridae* sp. A
1 *Ceratopogonidae* sp. A
1 *Brundiniella eumorpha* L
2 *Brillia parva* L
1 *Corynoneura* sp. A
1 *Metriocnemus obscuripes* L
7 female Orthocladiinae A

P93-18

NC: Swain Co., GRSM, Noland Ck near flumes on Pumphouse Road, 1695 m, 24 June 1992, CR Parker

- 1 *Boreochlus persimilis* A
1 *Bryophaenocladus* nr. *fumosinus* A
~5 *Doithrix parvilloso* A
~5 *Doithrix villosa* A
(sample had 10 *Doithrix* specimens; 2 were mounted)
2 *Euryhapsis* sp. 1 A
3 *Gymnometriocnemus brumalis* A
3 *Gymnometriocnemus* sp. 1 A
7 *Limnophyes* sp. 1 A
1 *Pseudorthocladus virgatus* A
13 *Micropsectra* sp. 4 A
3 *Micropsectra* sp. 5 A

P93-18 cont'd

- 4 *Microtendipes* cf. *pedellus* A
- 1 unidentifiable male Orthoclaadiinae A
- 4 female Orthoclaadiinae A
- 7 female Tanytarsini A

P93-19

NC: Swain Co., GRSM, Noland Ck 24hr drift sample,
Noland Creek watershed 1727 m, 25 June 1991, R
Noseworthy

- 1 Collembola sp.
- 1 Sciaridae sp. A
- 3 Ceratopogonidae sp. (2 spp.) A
- 1 *Bryophaenocladus flavoscutellatus* A
- 2 *Gymnometriocnemus* sp. 1 A
- 3 *Limnophyes* cf. *pilicistulus* A
- 2 *Parametriocnemus* cf. *lundbeckii* A
- 1 *Psilometriocnemus triannulatus* A
- 1 unidentifiable male Orthoclaadiinae A
- 4 female Orthoclaadiinae A

P93-20

NC: Swain Co., GRSM, Noland Ck 24hr drift sample,
Noland Creek watershed 1727 m, 14 July 1992, R
Noseworthy

- 1 *Brundiniella eumorpha* A
- 1 *Krenosmittia* sp. A
- 1 *Psilometriocnemus triannulatus* A
- 1 *Tvetenia* sp. A
- 1 *Micropsectra* sp. 4 A
- 2 female Orthoclaadiinae A

P93-21

NC: Swain Co., GRSM, Noland Ck 24hr drift sample,
Noland Creek watershed, 1727 m, 6 Oct 1992, G
Salansky & H Soehn

- 1 *Chaetocladius* sp. P
- 1 *Heleniella parva* A
- 1 *Tvetenia* sp. P

P93-22

NC: Haywood Co., GRSM, Palmer Ck above confl.
with Rough Fork, 2740 ft., 3 May 1993, CR Parker, G
Salansky

- 1 *Cricotopus/Orthocladus* sp. L
- 1 *Micropsectra* sp. L
- 2 *Rheotanytarsus* sp. L
- 1 *Rheotanytarsus* sp. P

P93-23

NC: Swain Co., GRSM, Noland Ck 24hr drift sample,
Noland Creek watershed 1727 m, 18 Aug 1992, G
Salansky & H Soehn

- 3 Collembola sp.
- 1 Sciaridae sp. A
- 1 *Brillia parva* L
- 2 *Corynoneura lobata* A
- 1 *Eukiefferiella* sp. A
- 1 *Gymnometriocnemus* sp. 1 A
- 3 *Heleniella parva* A
- 1 *Limnophyes* sp. L
- 3 *Parametriocnemus* cf. *lundbeckii* P
- 3 *Parametriocnemus* cf. *lundbeckii* A
- 1 *Psilometriocnemus triannulatus* P
- 2 *Tvetenia* "bavarica group" sp. L
- 1 *Micropsectra* sp. L
- 7 *Micropsectra* sp. P
- 3 *Micropsectra* sp. 4 A
- 1 *Polypedilum trigonus* ? A
- 6 female Orthoclaadiinae
- 1 female Tanytarsini

P93-24

NC: Swain Co., GSMNP, Burches Creek, upper site, 3
Nov 1992, G Salansky & H Soehn

- 4 *Brundiniella eumorpha* L
- 3 *Conchapelopia* sp. L

P93-25

NC: Swain Co., GSMNP, Burches Creek, upper site, 3
Nov 1992, G Salansky & H Soehn

- 1 *Stilocladius clinopecten* L
- 3 *Tvetenia* "bavarica group" sp. L
- 1 *Tvetenia* "discoloripes group" sp. 2 L
- 2 *Rheotanytarsus* sp. L
- 3 *Tanytarsus* sp. L
- 5 *Tribelos jucundum* L

P93-26

NC: Swain Co., GSMNP, Burches Creek, upper site, 3
Nov 1992, G Salansky & H Soehn

- 1 *Heleniella* sp. L
- 7 *Parachaetocladius* sp. L
- 1 Orthoclaadiinae genus G L

P93-27

2 June 1991

- 1 *Thaumalea* sp. L

P93-28

89003, ML001, 30-V-89

3 *Parametriocnemus* sp. L

P93-29

NC: Swain Co., GSMNP, 200 m below Pecks Corner Shelter, 5460', 4-VIII-1986, Haha/Pipes [??]

1 *Limnophyes* sp. L

P93-30

TN: Sevier Co., GSMNP, spring at Mt. LeConte Lodge, 1990 m, 21 June 1993, S Summerall, CR Parker, G Salansky

3 *Heterotrissocladius marcidus* group sp. L

P93-31

BLRM-634, mP459.5 (R), 20 Aug 1992

5 *Meropelopia* sp. L

P93-32

BLRM-634, mP459.5 (R), 20 Aug 1992

2 *Rheocricotopus tuberculatus* L

P93-33

NC: Swain Co., GSMNP, Flat Ck site 1, I 7 M, 3 Oct 1992, Heath, Greg, Chuck

1 *Brundiniella eumorpha* L
 1 *Pagastia* sp. L
 1 *Nanocladius* sp. L
 1 *Parachaetocladius* sp. L
 2 *Thienemanniella* sp. L
 3 *Tvetenia "discoloripes" group* sp. 2 L
 1 *Xylotopus par* L
 1 *Orthoclaadiinae* genus G L
 1 *Polypedilum* sp. L
 1 *Rheotanytarsus* sp. L
 9 *Tanytarsus* sp. L

P93-34

BLRM-63A, mP459.5 (2), 20 Aug 1992

9 *Cricotopus/Orthoclaadius* sp. L
 1 *Paracricotopus* sp. L

P93-35

BLRI, Soco Gap, 9 June 1993

2 *Conchapelopia* sp. L
 2 *Macropelopia* ? sp. L
 4 *Cricotopus/Orthoclaadius* sp. L
 1 *Thienemanniella* sp. L

P93-36

TN: Sevier Co., GSMNP, Twin Creeks area at Uplands Field Research Lab, 1920 ft., 9 Oct 1992, Parker, Salansky

4 *Heleniella* sp. L
 2 *Parachaetocladius* sp. L
 3 *Parametriocnemus* sp. F L
 2 *Micropsectra* sp. P
 2 *Micropsectra* sp. L

P93-37

NC: Swain Co., GRSM, boggy area at Campsite 50, 23 June 1993, G + S

2 *Brundiniella eumorpha* L
 2 *Macropelopia* ? sp. L
 1 *Rheopelopia* sp. 3 L
 1 *Heterotrissocladius marcidus* group sp. L
 3 *Tanytarsus* sp. L

P93-38

BLRI, MP 459.5, 9 June 1993

1 *Thaumalea* sp. L
 2 *Meropelopia* sp. L
 1 *Rheopelopia* ? sp. L
 8 *Diamesa* sp. L
 1 *Doithrix villosa* A
 1 *Tvetenia "bavarica" group* sp. L
 1 female *Tanytarsini* A

P93-39

TN: Sevier Co., GRSM, Rocky Spur Branch, light trap, near Roaring Fork Motor Nature Trail, 5 June 1993, Uplands employees

2 *Ceratopogonidae* sp. A (2 spp.)
 1 *Pseudorthoclaadius (Lordella)* sp. A
 1 *Smittia* sp. A
 6 *Microtendipes cf. pedellus* A
 1 *Micropsectra* sp. 4
 2 *Micropsectra* sp. 5
 1 female *Tanypodinae* A
 1 female *Chironomini* A
 1 female *Tanytarsini* A

P93-40

Drift, 9-VII-91

3 *Corynoneura* sp. A
 1 *Psilometriocnemus triannulatus* A
 2 *Tvetenia* sp. A
 16 female *Orthoclaadiinae* A

P93-41

BLRI near Waterrock, 9 June 1993

- 3 *Limnophyes minimus* A
- 1 *Micropsectra* sp. 4 A
- 1 *Tanytarsus* ? sp. A
- 1 female Orthocladiinae A

P93-42

BLRI, Craggy Gardens, P.Tnt Area, MP367.6, 10 June 1993

- 1 Sciaridae sp. A
- 1 *Thaumalea* sp. L
- 1 *Meropelopia* sp. L
- 1 *Diamesa* sp. L
- 1 Orthocladiinae Genus I sp. 2 A
- 1 *Psilometriocnemus triannulatus* A
- 1 *Micropsectra* sp. A
- 1 female Tanypodinae A

P93-43

NC: Swain Co., GRSM, Left Fork Deep Ck., 3500 ft., 8 April 1993, G Salansky

- 1 Orthocladiinae Genus I sp. 1 A
- 2 Orthocladiinae (1 female & 1 damaged male) A

P93-44

TN: Sevier Co., GRSM, Silers Ck., Site # 1, 3500 ft., 7 April 1993, CR Parker

- 1 *Diamesa* sp. A
- 16 *Gymnometriocnemus brumalis* A
- 12 Orthocladiinae Genus I sp. 1 A
- 1 *Orthocladius* cf. *hellenthali* A
- 2 *Parachaetocladius* cf. *abnobaesus* A
- 2 *Parametriocnemus* cf. *lundbeckii* A
- 4 *Micropsectra* sp. 5 A
- 2 *Stempellinella* sp. A
- 10 female Orthocladiinae A

P93-45

TN: Sevier Co., GSMNP, Surry Fork, L. Term S # 1, sweeping along creek, el: 2720, 8-VI-89, CR Parker

- 1 *Dixa* sp. A
- 1 *Brillia flavifrons* group sp. A

P93-46

TN: Blount Co., Derrick Knob Spring, AT shelter, Starkey Ck, 4880, 20-VII-89, D Pipes, J Kordewski[?], Spring Survey TH001 89008

- 1 Sciaridae sp. L

P93-47

NC: Hayward Co., GSMNP, Cataloochee Ck at USGS Gauging Station, 2475, 27-VII-1989, Parker & Pipes

- 2 Ephydriidae sp. L
- 3 *Conchapelopia* sp. L
- 2 *Pagastia* sp. L
- 1 *Eukiefferiella* sp. P
- 3 *Parametriocnemus* sp. L
- 1 *Thienemanniella* sp. L
- 1 *Tvetenia* sp. L
- 20 *Tvetenia "bavarica group"* sp. L
- 3 *Polypedilum fallax* L
- 26 *Rheotanytarsus* sp. L

Identifications of Great Smoky Mountains National Park material (samples P93-1 - P93-47) for Dr. C.R. Parker

(A = adult; P = pupa; L = larva)

J.H. Epler 30 January 1994

P93-1

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 11 Aug 1992, CE Noseworthy

- 3 Sciaridae sp. A
- 1 *Dixa* sp. A (Dixidae)
- 4 *Corynoneura lobata* A
- 1 *Orthocladius* (*Orthocladius*) cf. *nigratus* A
- 2 *Parametriocnemus* cf. *lundbeckii* A (1 gynandromorph)
- 1 *Parametriocnemus* cf. *lundbeckii* P
- 1 *Tvetenia discoloripes* group sp. 2 L
- 1 *Micropsectra* sp. 4 A
- 1 *Micropsectra* sp. 5 A
- 12 female Orthocladiinae A

P93-2

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 2-VII-1991, CE Noseworthy

- 2 Sciaridae sp. A
- 4 *Brundiniella eumorpha* L
- 1 *Gymnometriocnemus* sp. 1 A
- 1 *Limnophyes natalensis* A
- 3 *Parametriocnemus* cf. *lundbeckii* A
- 1 *Tvetenia* sp. P
- 3 female Orthocladiinae A

P93-3

NC: Swain Co., GRSM, Noland Ck 24hr drift sample, Noland Creek watershed, 1727 m, 25 Aug 1992, G Salansky & H Soehn

- 2 *Brillia parva* L
- 2 *Rheocricotopus* cf. *eminellobus* L
- 1 *Stempellinella* sp. L

P93-4

NC: Swain Co., GRSM, Noland Ck 24hr drift sample, Noland Creek watershed, 1727 m, 25 June 1991, R Noseworthy

- 1 Ceratopogonidae sp. P
- 1 *Brundiniella eumorpha* L
- 2 *Brillia parva* L
- 1 *Metriocnemus obscuripes* L
- 1 *Parametriocnemus* cf. *lundbeckii* L

P93-5

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 21 July 1992, CE Noseworthy

- 4 Sciaridae sp. A
- 1 Ceratopogonidae sp. A

P93-5 cont'd

- 1 *Brundiniella eumorpha* A
- 4 *Corynoneura lobata* A
- 1 *Eukiefferiella* sp. A
- 1 *Paracricotopus millrockensis* A
- 2 *Pseudosmittia* ? sp. A
- 1 *Synorthocladius* sp. P
- 1 *Thienemanniella* sp. L
- 1 *Tanytarsus* sp. A
- 24 female Orthocladiinae
- 1 female Chironomini

P93-6

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 16 July 1991, CE Noseworthy

- 2 Sciaridae sp. A
- 4 *Parametriocnemus* cf. *lundbeckii* A
- 14 female Orthocladiinae

P93-7

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 8 April 1993, CE Noseworthy

- 1 *Diamesa* sp. A
- 1 *Chaetocladius* sp. P
- 8 *Eukiefferiella claripennis* grp. sp. P
- 3 *Eukiefferiella* sp. A
- 1 *Stilocladius clinopecten* P
- 2 *Tvetenia* sp. P
- 8 *Tvetenia* sp. A
- 11 *Micropsectra* sp. 4 P

P93-8

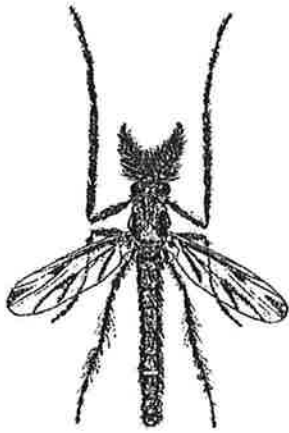
NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 30 Dec 1991, CE Noseworthy

- 1 *Parachaetocladius* sp. L

P93-9

NC: Swain Co., GRSM, Noland Creek drift sample, 1695 m, 6 Aug 1991, CE Noseworthy

- 1 Ceratopogonidae sp. A
- 3 *Eukiefferiella* sp. A
- 1 *Metriocnemus obscuripes* L
- 4 *Parametriocnemus* cf. *lundbeckii* A
- 1 *Psilometriocnemus triannulatus* A
- 1 *Tvetenia* sp. A
- 8 female Orthocladiinae A
- 2 female Tanytarsini A



John H. Epler, Ph.D.
Systematic Entomologist

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Macroinvertebrate Identification
Quality Assurance/Quality Control
Specializing in Chironomidae

INVOICE

INVOICE # GSM 94-01

INVOICE DATE : 30 January 1994

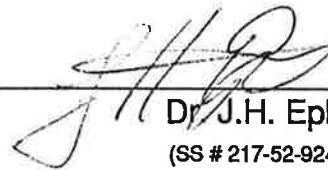
PURCHASE ORDER # 1443PX5460A2C02

TO: Superintendent
Great Smoky Mountains National Park
107 Park Headquarters Road
Gatlinburg, TN 37738

FOR: Identification of adults, larvae and pupae of Chironomidae from Blue Ridge
Parkway and Great Smoky Mountains National Park

*Approved for
payment 7 Feb 1994
Chuck Baker*

\$ 253.50 TOTAL DUE



Dr. J.H. Epler
(SS # 217-52-9248)

TERMS : Net 30 Days

United States Department of the Interior

National Biological Survey

Great Smoky Mountains National Park Field Station

1314 Cherokee Orchard Road

Gatlinburg, TN 37738

1 March 1994

Dr. John H. Epler
Rt. 3, Box 5485
Crawfordville, FL 32327

Dear John,

Thank you for the most recent list of identified chironomids. I have approved the invoice and sent it to the budget people at headquarters. Feel free to retain any specimens you deem scientifically interesting. Park Service regulations permit you to do this as long as they are eventually deposited in a repository where they are accessible to the public. The USNM is great, so are university collections, but generally private collections are considered unacceptable. As public property, the specimens must be available on demand to the public. If you decide to keep any specimens for any length of time, you may find some zealous Park Service museum curator (there are a few) sending you notices demanding that you inspect the specimens and return assurances that they are still in satisfactory condition. This is OK if you have one or two, but most people find it objectionable or totally unreasonable when they have more than a few specimens.

I have determined that NBS will pay for page and reprint charges if you follow their rules. NBS has adopted the Fish and Wildlife Service publication guidelines. When you have a manuscript and have chosen a journal, try to get an estimate of costs. They like to have two to three levels of editorial review (and they even maintain it won't delay publication much) prior to sending anything to the journal editor. If you anticipate paying a professional illustrator I'll have to check into the details. Let me know when you're ready to go, and I'll try to grease the skids.

We will be even more conscientious about taking care of the little critters in the future, but part of the problem may well be the denatured alcohol we use. It has been my experience that denatured ethanol makes specimens of all sorts very brittle. We can get alcohol that is denatured with kerosene if you think that might help. Straight EtOH is very difficult to obtain.

Sincerely,

Charles R. Parker, Ph.D.
Research Aquatic Biologist



John H. Epler, Ph.D.

Systematic Entomologist

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29 October 1993

Dr. C.R. Parker
National Biological Survey
Great Smoky Mountains National Park Field Station
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Chuck:

Thanks for your letter of 18 October. The specimens arrived safely.

Thanks also for the information concerning NBS. I'd appreciate any further information as it becomes available. There may be some way of funding systematics research through the government despite of what NSF has "done" to minimize funding. As we discussed over the phone, revisionary work will be necessary in order to "survey" many of the commonest and widespread chironomid genera, such as *Chironomus*, *Corynoneura*, *Cricotopus*, *Cryptochironomus*, *Psectrocladius*, *Rheotanytarsus*, *Tanytarsus* and *Thienemanniella*. There is a tremendous amount of work to be done, and very few qualified workers to do it!

Hope you can make it to NABS in Orlando next year!

Sincerely,

Dr. J.H. Epler



John H. Epler, Ph.D.

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Environmental/Biological Consulting
Macroinvertebrate Identification
Specializing in Chironomidae

8 December 1992

Dr. C.R. Parker
U.S. Dept. of Interior
National Park Service
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Dr. Parker:

I have finished the determinations of the Smoky Mountains National Park Chironomidae material sent in September. Enclosed you will find a list of specimens by sample (I coded all your samples from P1 to P51; this code number is listed with the label information, followed by the species from that sample vial), a species list of all taxa identified and an invoice for the identification of material.

The material sent contained more than Chironomidae; I have identified the majority of the material, but I did not identify adult Ceratopogonidae or Psychodidae. (As we discussed over the phone 25 November, you stated that you had a ceratopogonid person.) I believe that the identifications were hampered somewhat by your material being preserved in formaldehyde or Kahle's (i.e., specimens were difficult to prepare properly). These preservatives are great for whole larval preservation, but these solutions dehydrate/solidify muscle tissue that is then difficult to macerate (clear) for specimens which must be observed with a compound microscope. 70-80% ethanol would make a much better preservative for Chironomidae adults and immature stages. You might want to try collecting some material alive and attempt to rear the adults.

Your material was quite interesting! Much was what I would call "typical" or "expected" from the habitats collected. A good deal of work has been done on the chironomid fauna of seeps and similar areas in the SE US, but much more work is needed. Your material appears to contain about 8 undescribed species, and there appears to be sufficient material of some of these taxa to allow their description. I will be returning the bulk of your material to you (with voucher/reference specimens), but would like to retain some of the material for future description or work. By far the most interesting record was for the *Skutzia* specimens; this taxon is known only from Vancouver Island, Canada and the Amazon! Your specimens may represent a new species or a variant of the Canadian species.

The rate of \$12.50 per vial for larval and/or pupal specimens (with fewer than about 12 specimens/vial) works fine, but samples with several adult taxa took an inordinate amount of time to complete. Accordingly, I would like to change the rate for adult material vials to \$25.00/vial with 4 or fewer taxa; each additional taxon would be an additional \$15.00. Please let me know if this arrangement is satisfactory. I look forward to seeing more of this material! (I'll be out of my lab until 28 December.)

Sincerely,

Dr. J.H. Epler
enc.



John H. Epler, Ph.D.

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Environmental/Biological Consulting
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Specializing in Chironomidae

27 September 1992

Dr. C.R. Parker
U.S. Dept. of Interior
National Park Service
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Dr. Parker:

I am in receipt of your specimens. Following a cursory check it appears all arrived in good condition.

I plan to get to them within the next two weeks. Please let me know if there is any "deadline" that must be met.

Sincerely,

Dr. J.H. Epler



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Environmental/Biological Consulting
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19 March 1993

Dr. C.R. Parker
U.S. Dept. of Interior
National Park Service
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Dr. Parker:

Many thanks for the reprints!

I have been reviewing the specimens I recently identified for you, and I have a misidentification to report. The single adult specimen listed as *Chaetocladius* cf. *stamfordi* should be listed as *Tvetenia* sp. This genus requires revision; I may not be able to put a better name on it for some time. I hope this has not inconvenienced you in any manner.

Sincerely,

Dr. J.H. Epler



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25 February 1994

Dr. Charles R. Parker
National Biological Survey
Great Smoky Mountains National Park Field Station
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Chuck:

Enclosed you will find the final report on the identifications for the Chironomidae material sent in October 1993, along with an invoice covering the remainder of the work. This includes the remainder of the identifications, a list of taxa from the current group of samples and a list of all taxa identified by me to date. Note that it is possible that some of the specimens identified as "Sciaridae" may belong to other families, most probably Mycetophilidae. However, none are known to be aquatic and I have in general "ignored" them. All Sciaridae (and Ceratopogonidae) specimens were returned to their vials and thus can be sent to another specialist if so desired. Material will be returned to you via UPS.

There were some interesting taxa in these samples, many of which are apparently undescribed. The enclosed notes (on separate sheets) are for your enlightenment concerning the taxonomy of some of the material. I have for the time being retained all specimens of the following taxa: *Gymnometriocnemus* sp. 1 Epler, *Limnophyes* sp. 1 Epler, *Orthocladius* cf. *hellenthali* Sponis, Orthocladiinae genus I spp. 1 and 2 Epler, and *Micropsectra* sp. 6 Epler. I will update you if I can provide more concise identifications at a later date. I hope to get the new taxa described and published if I can get the time and secure funding. Do you have any objection to me sending some of these specimens out to other workers who may be working with related species or genera? Are there any regulations as to where types should be deposited; can some of this material be deposited in other museums? Any suggestions as to whom to write to get funding for descriptions of these new taxa?

Chironomidae are very delicate insects; they aren't "tough guys" like Trichoptera. Structures (antennae, foretarsi) important to their identification break off easily whether specimens are in alcohol or dried. Many of the specimens in your shipment suffered from breakage, although in the case of drift-collected adults much of the damage was probably done before they were shipped. Cotton plugs in the vials do not help reduce breakage; they are actually more of a nuisance because specimens get caught in the fibers. The best method to reduce shipment breakage is to make sure the vials are completely filled with fluid. It's the bubbles in the vials which cause the most damage to specimens; they are akin to placing pebbles in a vial and then shaking it!! As long as only one taxon is in a vial, it's not too difficult to put all the pieces together. But if several taxa are in a vial and have suffered breakage, things get more difficult or impossible.

See you at NABS?

Sincerely,

Dr. J.H. Epler



John H. Epler, Ph.D.
Systematic Entomologist

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Environmental/Biological Consulting
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Specializing in Chironomidae

INVOICE

INVOICE # GSM 94-02

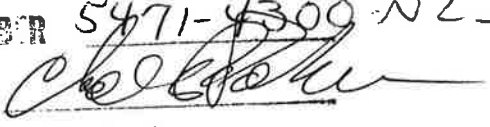
INVOICE DATE : 25 February 1994

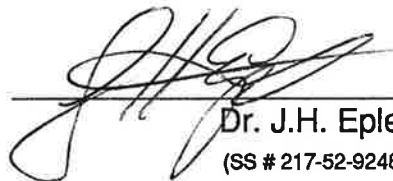
PURCHASE ORDER # 1443PX546094302

TO: Superintendent
Great Smoky Mountains National Park
107 Park Headquarters Road
Gatlinburg, TN 37738

FOR: Identification of adults, larvae and pupae of Chironomidae from Great Smoky Mountains National Park

\$ 1041.50 TOTAL DUE

DI-1 copy attached
~~BLANKET PURCHASE ORDER APPROVAL~~
ACCOUNT NUMBER 5471-4300 NZI
APPROVED BY 
DATE 2-28-94


Dr. J.H. Epler
(SS # 217-52-9248)

TERMS : Net 30 Days

Identifications of Great Smoky Mountains National Park material (samples P1- P51) for Dr. C.R. Parker

(A = adult; P = pupa; L = larva)

J.H. Epler 6 December 1992

P 1

BLRIS 22

1 *Zavreliomyia* sp. L

1 *Chaetocladius* sp. L

P 2

BLRI 30 6

1 *Natarsia* ? sp. L

1 unidentifiable Tanypodinae L

P 3

NC: Jackson Co., BLRI; in moss and under rocks in seep at Woodlin Cascade. MP446.7 4535 ft. CR Parker 18 July 1991

1 *Brundiniella eumorpha* P

P 4

NC: Swain Co., GRSM, sweeping along creek above flumes, Noland Ck Watershed. 2 July 1991 1707 m CR Parker

1 *Boreochlus persimilis* A

2 *Limnophyes carolinensis* A

1 *Psilometriocnemus triannulatus* A

1 unident. female Orthoclaadiinae A

2 *Polypedilum artifer* ? A

P5

NC: Buncombe Co., BLRI, roadcut seep 1/4 mile below Craggy Gardens Picnic Area MP367.6 5100 ft. CR Parker 18 July 1991

1 *Meropelopia americana* A

2 unident. female Orthoclaadiinae A

2 *Polypedilum trigonus* A

P6

NC: Swain Co., GRSM seep at roadcut, Clingmans Dome Rd at Noland Divide 23 July 1991 5925 ft. CR Parker & R Noseworthy

3 *Thaumalea* sp. L

P7

NC: Buncombe Co., BLRI, roadcut seep 1/4 mile below Craggy Gardens Picnic Area MP367.6 5100 ft. CR Parker 18 July 1991

2 *Meropelopia* sp. L

P8

NC: Swain Co., GRSM, seeps along trail from Forney Ridge Prkng Lt to Andrews Bald 11 June 1991 1850 m CR Parker

3 *Thaumalea* sp. L

P9

NC: Swain Co., GRSM seeps on cliff face, roadcut near Noland Divide Trailhead 4925 ft. 17 July 1991 Parker & R Noseworthy

3 *Heterotrissocladius marcidus* grp. sp. L

P10

NC: Buncombe Co., BLRI, roadcut seep 1/4 mile below Craggy Gardens Picnic Area MP367.6 5100 ft. CR Parker 18 July 1991

7 *Thaumalea* sp. L

P11

NC: Buncombe Co., BLRI, seep, roadcut cliff; just north Craggy Pinnacle Tunnel MP 364.3 5640 ft. CR Parker 19 July 1991

3 *Nais communis*

P12

NC: Buncombe Co., BLRI, large roadcut seep along Pkwy. from MP 356.6 to MP 356.2(?) approx. 1645 m CR Parker 30 August 1991

1 *Meropelopia* sp. L

3 *Chaetocladius* sp. L

1 *Corynoneura* sp. L

1 *Limnophyes* sp. L

4 *Micropsectra* sp. L

P13

NC: Swain Co., BLRI, spring seep, along N. Pkwy flowing S. MP 466.7; 2735 ft. 6 June 1991 CR Parker

1 *Corynoneura* sp. L

1 *Eukiefferiella claripennis* grp. sp. L

1 *Parametriocnemus* sp. P

1 *Thienemanniella* sp. L

P14

NC: Swain Co., GRSM, seeps on cliff face, roadcut near Noland Divide Trailhead 4925 ft. 17 July 1991 CR Parker & R Noseworthy

4 *Micropsectra* sp. L

P15

NC: Swain Co., GRSM, seeps on cliff face, roadcut near Noland Divide Trailhead 4925 ft. 17 July 1991 CR Parker & R Noseworthy

11 *Thaumalea* sp. L

P16

NC: Buncombe Co., BLRI, roadside seep .25 mi from Craggy Gardens Picnic Area MP 367.6; 1554 m CR Parker 29 August 1991

9 *Thaumalea* sp. L
1 *Hudsonimyia karelena* L
1 *Limnophyes* sp. L
1 *Parametriocnemus* sp. L
1 *Micropsectra* sp. L

P17

NC: Jackson Co, BLRI roadcut seep at cliff face, Scott Ck Ovrk MP 448.5 5050 ft. 11 July 1991 CR Parker

1 *Limonia* sp. L
2 *Dasyhelea* sp. :L
2 *Thaumalea* sp. L
1 unident. Tanypodinae L
1 *Paracricotopus* sp. L

P18

NC: Buncombe Co., BLRI, seep, roadcut cliff; just north Craggy Pinnacle Tunnel MP 364.3 5640 ft. CR Parker 19 July 1991

1 *Thaumalea* sp. L

P19

NC: Swain Co., GRSM, seeps on cliff face, roadcut near Noland Divide Trailhead 4925 ft. 17 July 1991 CR Parker & R Noseworthy

2 *Limonia* sp. L

P20

NC: Swain Co., GRSM Noland Ck 24 hr Drift Sample Noland Ck Watershed 1727 m 13 Aug '91 (IN) R Noseworthy

2 Ceratopogonidae A
1 *Brundiniella eumorpha* A
1 *Brundiniella eumorpha* L
1 *Meropelopia* sp. L
1 *Antillocladius* sp. nov. nr. *pluspilalus* A
1 *Corynoneura* "scutellata grp." sp. A
1 *Heleniella parva* A
2 *Heleniella parva* P
1 *Orthocladius* (*Symposiocladius*) *lignicola* P
1 *Parametriocnemus* sp. L
1 *Parametriocnemus* sp. P
5 *Psilometriocnemus triannulatus* A

P20 (cont'd)

3 *Psilometriocnemus triannulatus* P
5 *Tvetenia* "bavarica grp." sp. L
17 unident. female Orthoclaadiinae A
10 *Micropsectra* sp. 4 P
1 *Micropsectra* sp. 4 A } 10 specimens total
1 *Micropsectra* sp. 5 A } for these 2 taxa
1 *Stempellinella* sp. L

P21

NC: Jackson Co., BLRI in moss and under rocks in seep at Woodfin Cascade MP 446.7 4535 ft. CR Parker 18 July 1991

1 *Brundiniella eumorpha* L
2 *Tribelos jucundum* L

P22

NC Buncombe Co., BLRI seeps and muck of bog at Mt. Pisgah Cmpgrnd. 12 July 1991 4860 ft. CR Parker MP 408.8

2 *Apsectrotanypus* sp. L

P23

NC: Jackson Co., BLRI roadcut seep at cliff face, Scott Ck Ovrk MP 448.5 5050 ft. 11 July 1991 CR Parker

3 *Tipula* ? sp. L

P24

NC: Jackson Co., BLRI seep, Bunches Bald Overlook on rock face of cliff MP 459.5; 4935 ft. 6 June 1991 CR Parker

2 *Thaumalea* sp. L
1 *Corynoneura* sp. L
4 *Paracricotopus* sp. L

P25

NC: Jackson Co., BLRI seep, Bunches Bald Overlook in ditch below cliff MP 459.5; 4935 ft. 6 June 1991 CR Parker

1 *Corynoneura* sp. L
1 *Parametriocnemus* sp. L
1 *Thienemanniella* sp. L

P26

NC: Swain Co., GSMNP Birch Spring, Birch Spring Shelter, AL ; trib Gaser CK 17 VII 89 Elev: 3600 D. Pipes, J. Koralewja

1 *Zavrelimyia* sp. L
2 *Parametriocnemus* sp. L
1 *Psilometriocnemus* sp. L
1 *Tvetenia* sp. L

P27

NC: Swain Co, GRSM sweeping Noland Ck above flumes at Pumthouse Rd 3 July 1991 5600 ft. CR Parker

- 1 *Limnophyes carolinensis* A
- 1 *Metriocnemus obscuripes* L
- 2 *Metriocnemus obscuripes* A
- 1 *Polypedilum artifer* ? A

P28

NC: Swain Co., GRSM Noland Creek near flumes on Pumthouse Road, 1695 m 17 June 1992 CR Parker

- 3 *Boreochlus persimilis* A
- 1 *Brundiniella eumorpha* A
- 5 *Pseudorthocladus morsei* A
- 1 *Pseudosmittia forcipata* A
- 2 *Smittia* sp. nov. A
- 5 unident. female Orthocladiinae A
- 1 *Microtendipes* cf. *pedellus* A
- 1 *Polypedilum simulans* A
- 4 *Polypedilum trigonus* A
- 1 *Micropsectra* sp. 4 A
- 1 *Zavrelia* sp. nov. A
- 2 female Tanytarsini A

P29

BLRI C37 MP 356.6 21 May 1992

- 1 *Zavrelimyia* sp. L
- 1 *Tanytarsus* sp. L

P30

BLRI C33A 4 Mar 92 MP 455.7

- 1 *Diamesa* sp. L

P31

BLRI M48 MP 314.3 15-7-92 (right)

- 3 *Brundiniella eumorpha* L
- 1 *Prodiamesa olivacea* L

P32

BLRI M7A MP 446.6 27 May 92

- Krenopelopia* sp. L
- Meropelopia* sp. L

P33

BLRI M60 MP 358.2 (R) 29 July 1992

- 1 *Polypedilum trigonus* A

P34

BLRI C38 MP 367.6 21 May 92

- 1 *Hexatoma* sp. L
- 1 *Brundiniella eumorpha* L
- 1 *Micropsectra* sp. L

P35

BLRI M51 MP 304.5 15/7/92

- 1 *Thaumalea* sp. L
- 1 *Chaetocladius* sp. L
- 1 *Corynoneura* sp. L
- 1 *Eukiefferiella claripennis* grp. sp. L
- 1 *Eukiefferiella gracei* grp. sp. P
- 2 *Eukiefferiella gracei* grp. sp. L
- 1 *Orthocladus* (*Eudactylocladius*) sp. L
- 2 *Orthocladus* (*Eudactylocladius*) sp. P/A

P36

NC: Swain Co., GRSM Noland Ck 24 hr Drift Sample Noland Ck Watershed 1727 m 3 Mar 92 R Noseworthy

- 2 *Orthocladus dentifer* ? A
- 11 unident. female Orthocladiinae A

P37

NC: Swain Co., GRSM Noland Ck 24 hr Drift Sample Noland Ck Watershed 1727 m 20 Aug 92

R Noseworthy

- 1 Psychodidae A
- 1 Ceratopogonidae A
- 1 *Brundiniella eumorpha* A
- 2 *Antillocladius* sp. nov. nr *pluspilalus* A
- 1 *Brillia flavifrons* L
- 1 *Heleniella parva* P
- 5 *Heleniella parva* A
- 4 *Psilometriocnemus triannulatus* A
- 1 *Orthocladus dentifer* ? A
- 2 *Tvetenia "bavarica* grp." sp. L
- 4 *Micropsectra* sp. P
- 10 *Micropsectra* sp. A

P38

BLRI S-A 5-19-92 Whetstone Ridge Horse Pasture

- 1 *Diamesa* sp. L

P39

BLRI M9D Pisgah Campground Bog 11 June 92

- 1 *Macropelopia* sp. L
- 1 *Polypedilum scalaenum* grp. sp. L

P40

NC: Watauga Co., BLRI sphagnum bog, Julian Price Park Wetlands Natural Area MP 296.5 1035 m CR Parker 12 September 1991

1 *Chironomus* sp. L

P41

NC: Swain Co., GRSM in seeps among algae and moss acid bog at Andrews Bald 11 June 1991 1767 m CR Parker

1 *Meropelopia* sp. L

2 *Chaetocladius* sp. L

P42

TN: Sevier Co., GSMNP Rocky Spur Br. upstream of Roaring Fk. Mtr. Nat. Trail, 7 VI 90, Parker, Pipes, Cager

2 *Dixella* sp. A

1 *Stenochironomus woodi* A

P43

BLRI M53A Tanawha Trail

1 unident. female Tanypodinae A

1 *Metriocnemus obscuripes* A

2 unident. female Orthoclaadiinae A

4 *Micropsectra* sp. A

P44

NC: Haywood Co., BLRI boggy shrub wetland seep, Soco Gap MP 455.7; 4300 ft. 6 June 1991 CR Parker

1 *Corynoneura* sp. A

1 *Limnophyes carolinensis* A

1 *Pseudorthocladus tricanthus* A

1 *Micropsectra* sp. 3 A

1 *Skutzia* sp. nov.?

P45

NC: Haywood Co., BLRI sweeping seep area, woodland shrub bog at Soco Gap 13 June 1991 1311 m CR Parker

2 Ceratopogonidae A

1 *Boreochlus persimilis* A

1 *Chaetocladius* cf. *stamfordi* A

1 *Cricotopus* nr. *fuscus* A

5 *Limnophyes minimus* A

7 unident. female Orthoclaadiinae A

5 *Polypedilum trigonus* A

1 unident. female Chironomini A

2 *Micropsectra* sp. 1 A

1 *Micropsectra* sp. 3 A

2 *Skutzia* sp. nov. ? A

6 *Zavrelia* sp. nov. A

3 unident. female Tanytarsini A

P46

BLRI M-49

MP 315.6 15 July 92

1 *Macropelopia* sp. L

4 *Prodiamesa olivacea* L

1 *Micropsectra* sp. L

1 *Tanytarsus* sp. L

P47

NC: Buncombe Co., BLRI roadside seep, on S flowing S; .4 mi N Bee Tree Gap MP 367.2 1524 m CR Parker 30 August 1991

6 *Thaumalea* sp. L

P48

NC: Swain Co., GRSM Noland Ck Noland Ck Watershed 1727 m 30 Oct 91

R Noseworthy

2 unident. female Orthoclaadiinae A

P49

BLRI C38 MP 367.6 21 May 92

1 *Thaumalea* sp. L

1 *Conchapelopia* sp. L

1 *Micropsectra* sp. L

P50

NC: Swain Co., GRSM Noland Ck 24 hr Drift Sample Noland Ck Watershed 1727 m 3 Mar 92

R Noseworthy

1 *Chaetocladius* sp. L

1 *Eukiefferiella gracei* grp. sp. L

P51

BLRI M-45 Hwy 221 N of MP 305 14 July 92

1 *Lipurometriocnemus vixlobatus* A

1 unident. female Orthoclaadiinae A

Species List for Great Smoky Mountains National Park Material
(for material received 1993)

Insecta - Diptera

Ceratopogonidae

Dixidae

Dixa sp.

Ephydriidae

Thaumaleidae

Thaumalea sp.

Chironomidae

Podonominae

Boreochlus persimilis (Johannsen)

Tanypodinae

Brundiniella eumorpha (Sublette)

Conchapelopia sp.

Macropelopia ? sp

Meropelopia sp.

Rheopelopia sp. 3 Roback

Diamesinae

Diamesa sp.

Pagastia sp.

Orthoclaadiinae

Brillia flavifrons (Johannsen) group sp.

Brillia parva Johannsen

Bryophaenocladus flavoscutellatus (Malloch)

Bryophaenocladus nr. *fumosinus* (Curran)

Chaetocladus sp.

Corynoneura lobata Edwards

Corynoneura sp.

Cricotopus/Orthocladus sp.

Doithrix parvilliosa Sæther & Sublette

Doithrix villosa Sæther & Sublette

Eukiefferiella claripennis (Lundbeck) group sp.

Eukiefferiella sp.

Euryhapsis sp. 1 Epler

Gymnometriocnemus brumalis (Edwards)

Gymnometriocnemus subnudus (Edwards)

Gymnometriocnemus sp. 1 Epler

Heleniella parva Sæther

Heterotrissocladius marcidus (Walker) group sp.

Krenosmittia sp.

Limnophyes minimus (Meigen)

Limnophyes natalensis Kieffer

Limnophyes cf. *pilicistulus* Sæther

Limnophyes sp. 1 Epler

Limnophyes sp.

Metriocnemus obscuripes (Holmgren)

Nanocladus sp.

Orthocladus cf. *hellenthali* Sponis

Orthocladus cf. *nigritus* Edwards

Parachaetocladus cf. *abnobaesus* (Wülker)

Parachaetocladus sp.

Orthoclaadiinae (cont'd)

Paracricotopus millrockensis Caldwell

Paracricotopus sp.

Parametriocnemus cf. *lundbeckii* (Johannsen)

Parametriocnemus sp. F Epler

Parametriocnemus sp.

Parasmittia cf. *carinata* Strenzke

Psectrocladius sp.

Pseudorthoccladius virgatus Sæther & Sublette

Pseudorthoccladius (*Lordella*) sp.

Pseudosmittia ? sp.

Psilometriocnemus triannulatus Sæther

Rheocricotopus cf. *eminellobus* Sæther

Rheocricotopus tuberculatus Caldwell

Smittia sp.

Stilocladius clinopectus Sæther

Synorthoccladius sp.

Thienemanniella sp.

Tvetenia "bavarica group" sp.

Tvetenia "discoloripes group" sp. 2 Epler

Tvetenia sp.

Xylotopus par (Coquillett)

Orthoclaadiinae genus I sp. 1 Epler

Orthoclaadiinae genus I sp. 2 Epler

Orthoclaadiinae genus G Epler

Chironominae

Chironomini

Microtendipes cf. *pedellus* (De Geer)

Polypedilum fallax (Johannsen)

Polypedilum trigonus Townes ?

Polypedilum sp.

Tribelos jucundum (Walker)

Tanytarsini

Micropsectra sp. 3

Micropsectra sp. 4

Micropsectra sp. 5

Micropsectra sp. 6

Micropsectra sp.

Rheotanytarsus sp.

Stempellinella sp.

Tanytarsus sp.

Species List for Great Smoky Mountains National Park material

Oligochaeta

Naididae

Nais communis Piguet

Insecta - Diptera

Tipulidae

Hexatoma sp.

Limonia sp.

Tipula ? sp.

Ceratopogonidae

Dasyhelea sp.

Dixidae

Dixella sp.

Psychodidae

Thaumaleidae

Thaumalea sp.

Chironomidae

Podonominae

Boreochlus persimilis (Johannsen)

Tanypodinae

Apsectrotanypus sp.

Brundiniella eumorpha (Sublette)

Conchapelopia sp.

Hudsonimyia karelena Roback

Krenopelopia sp.

Macropelopia sp.

Meropelopia americana (Fittkau)

Meropelopia sp.

Natarsia ? sp.

Zavreliomyia sp.

Diamesinae

Diamesa sp.

Prodiamesinae

Prodiamesa olivacea (Meigen)

Orthoclaadiinae

Antillocladius sp. nov. nr. *pluspilalus* Sæther

Brillia flavifrons (Johannsen)

Chaetocladius cf. *stamfordi* (Johannsen)

Chaetocladius sp.

Cricotopus nr. *fuscus* (Kieffer)

Corynoneura "scutellata Winnertz group" sp.

Corynoneura sp.

Eukiefferiella claripennis (Lundbeck) group sp.

Eukiefferiella gracei (Edwards) group sp.

Heleniella parva Sæther

Heterotrissocladius marcidus (Walker) group sp.

Limnophyes carolinensis Sæther

Limnophyes minimus (Meigen)

Limnophyes sp.

Lipurometriocnemus vixlobatus Sæther

Metriocnemus obscuripes (Holmgren)

species list (cont'd)

Orthocladius (Eudactylocladius) sp.
Orthocladius (Orthocladius) dentifer Brundin ?
Orthocladius (Symposiocladius) lignicola Kieffer
Paracricotopus sp.
Parametriocnemus sp.
Pseudorthocladius morsei Sæther
Pseudorthocladius tricanthus Sæther
Pseudosmittia forcipata (Goetghebuer)
Psilometriocnemus triannulatus Sæther
Psilometriocnemus sp.
Smittia sp. nov.
Thienemanniella sp.
Tvetenia "bavarica" (Thienemann) group" sp.
Tvetenia sp.

Chironominae

Chironomini

Chironomus sp.
Microtendipes cf. *pedellus* (De Geer)
Polypedilum artifer (Curran) ?
Polypedilum scalaenum (Schränk) group sp.
Polypedilum simulans Townes
Polypedilum trigonus Townes
Stenochironomus woodi Borkent
Tribelos jucundum (Walker)

Tanytarsini

Micropsectra sp. 1
Micropsectra sp. 3
Micropsectra sp. 4
Micropsectra sp. 5
Micropsectra sp.
Skutzia sp. nov.?
Stempellinella sp.
Tanytarsus sp.
Zavrelia sp. nov.

Notes on Great Smoky Mountains National Park Chironomidae material
(J.H. Epler; February 1994)

Specimen identifications qualified by a question mark were usually in poor condition and accurate identification was not possible. Most of these specimens were from drift samples and were usually incomplete and/or decomposed.

Brillia flavifrons (Joh). group sp. - This specimen is most similar to *B. flavifrons* (Joh.), but antennal ratio was significantly out of the species' published range.

Euryhapsis sp. 1 Epler - The genus *Euryhapsis* is recorded mostly from western North America, although Hudson et al. (1990) recorded an unidentified male from North Carolina and larvae from Tennessee. *E. sp. 1* appears to be undescribed.

Gymnometriocnemus sp. 1 Epler - This is apparently an undescribed species.

Limnophyes cf. *pilicistulus* Sæther - The specimens are intermediate between *L. pilicistulus* and *L. recisus* Sæther. Sæther (1990) stated that the two may be synonyms; *L. pilicistulus* would be the senior synonym by page precedence. These intermediate specimens suggest that the two are synonyms. Both "species" were previously known only from Nebraska, South Dakota, Oregon, British Columbia, Manitoba and the Yukon.

Limnophyes sp. 1 Epler - This appears to be a new species.

Orthocladius cf. *hellentali* Söponis - Only one specimen of this taxon was found; it had lost its antennae. It keys to *O. hellentali* in Söponis (1977) by virtue of its lack of tarsal pseudospurs. The genitalia are similar and it has robust thoracic dorsocentral setae. However, *O. hellentali* has previously been recorded only from Alaska, California and the Northwest Territories. More material would help (and Söponis has "retired"!).

Parachaetocladius cf. *abnobaesus* (Wülker) - The genitalia of the two specimens collected are slightly different than those illustrated for *P. abnobaesus*. These specimens may represent a new species, or may be extreme variants of the described species.

Parametriocnemus cf. *lundbeckii* (Joh.) - This taxon has been considered to show much variation, and may be a complex of several species (Sæther 1969). The genus requires revision.

Parametriocnemus sp. F Epler - This apparently is the same taxon (or is closely related to) the Orthoclaadiinae genus F of Epler (1992). Reared material of two similar species from Costa Rica shows that "Orthoclaadiinae genus F" is not clearly separable from *Parametriocnemus*, and I now consider genus F to be a member of *Parametriocnemus*.

Parasmittia cf. *carinata* Strenzke - There was only previous record for this genus from North America, a single specimen from Nova Scotia. Without comparative material, I can not be sure your specimens are "true" *P. carinata*. The specimens have lost their antennae.

Tvetenia spp. - Nearctic larvae of this genus were considered to fall into two groups, the *bavarica* and *discoloripes* groups, by Bode (1983). However, Mason (1985) noted that these two groups may not be sustainable when other life stages are taken into consideration. Thus I have used "" "" around the group names.

Orthoclaadiinae genus I sp. 1 Epler & Orthoclaadiinae genus I sp. 2 Epler - These adult specimens appear to represent a new genus. The specimens will key to "apparently" *Lipuometriocnemus* in the Holarctic Keys (Wiederholm 1989) for adults, but don't really fit that genus that well. However, they may also represent aberrant species of *Hydrobaenus*.

Orthoclaadiinae genus G Epler - Two larvae were found. They do not match the diagnoses or descriptions of any known genera, but could represent the larvae of a genus known only from adults.

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- Hudson, P.L., D.R. Lenat, B.A. Caldwell & D. Smith. 1990. Chironomidae of the Southeastern United States: A checklist of species and notes on biology, distribution, and habitat. U.S. Fish Wildl. Ser., Fish. Wildl. Res. 7:1-46.
- Mason, P.G. 1985. The larva of *Tvetenia vitracies* (Sæther) (Diptera: Chironomidae). Proc. Ent. Soc. Wash. 87: 418-420.
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July 5, 1995

Dr. Charles R. Parker
National Biological Survey
Great Smoky Mountains
National Park Field Station
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

Dear Dr. Parker:

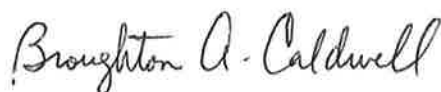
I am writing to inquire about some records of chironomid midges identified for you by Dr. John H. Epler within the last year or so. I became aware of the records for the Smokies during a recent visit with John. He indicated that several new southeastern and/or Nearctic records of chironomids were represented by the specimens.

I have been involved with Pat Hudson (NBS, Ann Arbor, MI), Dave Lenat (NC Dept. Environ. Mgt., Raleigh, NC), and Dave Smith (US EPA, Athens, GA) in a 1990 publication, "Chironomidae of the Southeastern United States: A Checklist of Species and Notes on Biology, Distribution, and Habitat" published in the US Fish and Wildlife Research Series of reports. I would like to include any and all new records of chironomids for the southeast in a planned revision and update of this work which is now in progress.

I would appreciate hearing from you as to whether these records could be utilized in our revised listing of southeastern chironomids. Your contribution of any information would be properly acknowledged. Also, I need some additional information about insect collecting in the Great Smoky Mountains National Park as regards necessary permits, and do collections in the city of Gatlingburg require a permit?

Thanks in advance for any assistance that you can offer.

Sincerely,

A handwritten signature in cursive script that reads "Broughton A. Caldwell".

Broughton A. Caldwell