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21 July 1995

Al Ambler
USDI- Department of Interior
National Park Service
Delaware Water Gap National Rec. Area
Bushkill, PA 18324

Dear Al,

Enclosed please find the data sheets for the ants and opilions you collected in the Delaware Water Gap National Recreational Area during 1993. The sheets are numbered 1-9. The codes are listed on an enclosed sheet. I will use these same codes for all future data. Also enclosed is a list of all the taxa collected, by families and subfamilies.

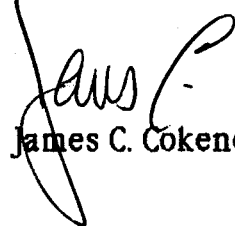
I am also enclosing a copy of a bibliography, in case you need to locate literature on opilions. If you need ant citations, I can refer you to a database on Internet.

Also enclosed is the signed form for payment. Please route it to the proper person.

Under separate covers I am sending the vouchers to the Smithsonian Institution and four vials of mis-sorted samples to you.

I hope all arrive okay.

Sincerely,



James C. Cokendolpher

1994 USDI, National Park Service
Delaware Water Gap National Recreation Area
determinations by J. C. Cokendolpher

Codes for data sheets (from left to right)

TS = Trap Site (AC = Adams Creek, VC = Van Capens), SC = Site Code, YR = last two digits in year of collection; F = family, G = genus or genera, S = species, # = number of individuals.

Families

OPILIONS

- 1 = Phalangidae
- 2 = Sclerosomatidae
- 4 = Sabaconidae

ANTS

- 3 = Formicidae

Genera

OPILIONS

- 1 = Odiellus
- 2 = Leiobunum
- 3 = Nelima
- 15 = Sabacon
- 16 = Hadrobunus

ANTS

- 4 = Camponotus
- 5 = Aphaenogaster
- 6 = Formica
- 7 = Leptothorax
- 8 = Myrmica
- 9 = Stenamma
- 10 = Lasius
- 11 = Solenopsis (Diplorhoptrum)
- 12 = Myrmecina
- 13 = Tapinoma
- 14 = Acanthomyops

Species

OPILIONS

- 1 = pictus
- 2 = aldrichi
- 3 = politum
- 4 = nigropalpi
- 5 = elegans
- 6 = ventricosum
- 7 = vittatum
- 8 = calcar
- 29 = cavicolens
- 30 = maculosus

ANTS

- 8 = pennsylvanicus
- 9 = picea
- 10 = subsericea
- 11 = curvispinosus
- 12 = longispinosus
- 13 = punctiventris
- 14 = neogagates
- 15 = diecki
- 16 = nearcticus
- 17 = alienus
- 18 = emeryana
- 19 = noveboracensis
- 20 = schmitti
- 21 = sp., Solenopsis
- 22 = americana
- 23 = umbratus
- 24 = querquetulana
- 25 = rubricunda
- 26 = sessile
- 27 = interjectus
- 28 = murphyi

Harvestmen and Ants captured at DEWA (those in red are new for 1994)

Class Arachnida

Order Opiliones

Suborder Cyphopalpatores

Family Sabaconidae

Sabacon cavicolens (Packard)

Family Phalangiidae

Subfamily Phalangiinae

Odiellus pictus (Wood)

Family Sclerosomatidae

Subfamily Leiobuninae

Hadrobunus maculosus (Wood)

Leiobunum aldrichi Weed

Leiobunum calcar (Wood)

Leiobunum nigropalpi (Wood)

Leiobunum politum Weed

Leiobunum ventricosum (Wood)

Leiobunum vittatum (Say)

Nelima elegans (Weed)

Class Insecta

Order Hymenoptera

Family Formicidae

Subfamily Dolichoderinae

Tapinoma sessile (Say)

Subfamily Formicinae

Acanthomyops interjectus Mayr

Acanthomyops murphyi (Forel)

Camponotus nearcticus Emery

Camponotus noveboracensis (Fitch)

Camponotus pennsylvanicus (DeGeer)

Formica neogagates Emery

Formica querquetulana Kennedy & Dennis

Formica rubricunda Emery

Formica subsericea Say

Lasius alienus Mayr

Lasius umbratus

Subfamily Myrmicinae

Aphaenogaster picea Emery

Leptothorax curvispinosus Mayr

Leptothorax longispinosus Roger

Myrmecina americana Emery

Myrmica emeryana Forel

Myrmica punctiventris Roger

Solenopsis (Diplorhoptrum) sp.

Stenamma diecki Emery

Stenamma schmitti Wheeler

SITE	STRATM	TRAP#	YEAR	FAMILY	GENUS	SPECIES	NUMBER
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A	E	1	93	2	2	3	3
A	E	1	93	2	2	4	1
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V	S	11	93	2	2	7	2
V	S	11	93	3	4	8	1
V	S	12	93	1	1	1	1
V	S	12	93	2	2	2	3
V	S	12	93	2	2	3	8
V	S	12	93	3	4	8	3

SITE	STRATM	TRAP#	YEAR	FAMILY	GENUS	SPECIES	NUMBER	
A	S	10	93	3	5	9	8	
A	E	11	93	3	5	9	2	
A	S	7	93	3	5	9	1	
A	M	2	93	3	5	9	1	
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V	S	11	93	2	2	7	2	
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A	E	5	93	1	1	1	1	
V	S	12	93	1	1	1	1	
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A	S	1	93	1	1	1	1	

V	E	1	93	1	1	1	1	
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V	M	11	93	2	2	3	1	
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V	E	6	93	2	2	4	2
V	E	5	93	2	2	4	4
V	E	11	93	2	2	4	1
V	S	3	93	2	2	4	6
V	M	1	93	2	2	4	4
V	M	7	93	2	2	4	1
V	E	7	93	2	2	4	1
V	M	3	93	2	2	4	1
V	E	3	93	2	2	4	2
V	M	11	93	2	2	4	4
V	E	8	93	2	2	4	1
V	E	4	93	2	2	4	1
V	M	9	93	2	2	4	1
V	E	10	93	2	2	4	12
V	E	9	93	2	2	4	4
V	E	12	93	2	2	4	2
V	M	8	93	2	2	4	1
V	S	12	93	2	2	2	3
V	M	2	93	2	2	2	3
V	E	4	93	2	2	2	1
V	M	7	93	2	2	2	3
V	S	6	93	2	2	2	1
V	S	7	93	2	2	2	1
V	M	6	93	2	2	2	1
V	E	3	93	2	2	2	1
V	E	7	93	2	2	2	2
V	M	1	93	2	2	2	1
V	M	9	93	2	2	2	1
V	M	12	93	2	2	2	2
V	M	2	93	2	2	2	1
V	M	8	93	2	2	2	3
V	E	11	93	2	2	2	2
A	E	12	93	2	2	2	1
A	M	3	93	2	2	2	11
A	M	11	93	2	2	2	5
A	M	10	93	2	2	2	5
A	S	6	93	2	2	2	1
A	E	3	93	2	2	2	1
A	M	7	93	2	2	2	1
A	M	1	93	2	2	2	1

A	M	8	93	2	2	2	1
A	S	10	93	2	2	2	2
A	E	7	93	2	2	2	2
A	S	9	93	2	2	2	2
A	S	8	93	2	2	2	1
A	E	10	93	2	2	2	1
A	E	6	93	2	2	2	2
A	E	5	93	2	2	2	2
A	S	12	93	2	2	2	1
A	M	4	93	2	2	2	1
A	S	1	93	2	2	2	2
A	S	2	93	2	2	2	4
A	E	8	93	2	2	2	1
A	M	5	93	2	2	2	2
A	E	2	93	2	2	2	2
A	S	5	93	2	2	2	1
A	S	11	93	2	2	2	1
A	M	6	93	2	2	2	4