



**NORTHERN
KENTUCKY
UNIVERSITY**

College of Arts and Sciences
Department of Biological Sciences
(606) 572-5110

March 14, 2000

Keith R. Langdon
Great Smoky Mountains National Park
1314 Cherokee Orchard Road
Gatlinburg, TN 37738

BECA -
Keep for Searcy Center.
Don has specimens - copy given
also to Chude.
KRL

Dear Keith,

I am not positive about where the report concerning ATBI collections should be sent, so I thought I would send it to you and let you forward it on to the appropriate office. I thought you might be interested to hear how my fly collecting turned out.

I ended up collecting in four different geographic areas within the park: Clingman's Dome (28 specimens); Brushy Mountain area (46 specimens); Chimney Rocks (6 specimens); Purchase Knob (189 specimens). The summits of Clingman's Dome and Brushy Mountain yielded very few of the "hill-topping" species that I had expected to find. All in all, they were disappointing in the diversity and numbers of specimens of Sarcophagidae (flesh flies) that I was able to find.

I collected just a few specimens that were sunning on the large boulders out in the stream at Chimney Rocks, when my family stopped there for a picnic lunch. I only caught 4 sarcs there, but two of them were very interesting. This is a place that I would like to return to and spend more time collecting.

The trip to Purchase Knob was, by far, the most fruitful for the collection of Sarcophagidae. At the summit of Purchase Knob, I collected a nice series of "hill-topping" species in the subgenus *Bercaeopsis* of the genus *Sarcophaga*. This is a subgenus where I think there may be many undescribed species. I caught a much higher diversity of species at a nearby mountaintop outside of the park (a place called Hawksbill Mt. in Pisgah National Forest in North Carolina). I think the main difference between these two places was that Hawksbill is "bald" at the top (no high trees at summit and lots of rocky outcrops) while Purchase Knob was forested at the summit. When trees are at the summits of these Knobs, many of the fly species apparently move up into the canopy. I recently spoke with Will Reeves at Clemson University, and he mentioned that he knows of some accessible bald hilltops within the park and that he would map these out for Monty and me and would take us there himself, if the timing was right. In case the name does not ring a bell, Will Reeves was recently hired (part-time?) at Clemson to handle specimens from the Diptera TWIG, sending undetermined specimens to participating systematists for identification.

Another interesting collecting site was along sandy areas in the dirt road leading to Purchase Knob, which split off from the main road going up to the house. I collected a number of specimens of the Sarcophagidae subfamily Miltogramminae there. The species I collected all appear to be inquilines of fossorial (ground nesting) solitary wasps (the maggots feed on the young and provisions of the wasp nest).

I have attached a site-by-site list of the specimens that I collected. Under separate cover, I am returning to you the Calliphoridae and much of the Sarcophagidae that I collected last year (and a couple of pest species of Muscidae). This amounts to 114 Sarcophagidae, 17 Calliphoridae, and 3 Muscidae (total of 134 specimens returned to you). I have retained 41 specimens of Sarcophagidae for further study. 94 specimens of Diptera, identified to the family level, were sent to Will Reeves at Clemson University for dispersal to appropriate systematic specialists. All Tachinidae that I collected have been given to Monty Wood (either in the field or shortly after).

A note concerning the life histories of some of the returned Sarcophagidae. Members of the genus *Ravinia* are known to be dung breeders. The large amount of *Ravinia querula* from Purchase Knob indicates livestock (cattle or horses) in the area. *Brachicoma sarcophagina* is an inquiline in the nests of bumble bees. *Boettcheria bisetosa* is a species that feeds on caterpillars and is normally associated with forested areas. *Senotainia trilineata* is an important inquiline of fossorial wasp nests. The returned Calliphoridae are all carrion breeders. The returned Muscidae are pests of livestock.

Nunn Drive
Highland Heights, Kentucky 41099

Northern Kentucky University is an equal opportunity institution.

I am not sure if I will be able to come down to collect in the park this summer, but I will try. I am trying to set up a collecting trip in late May (with Monty Wood) to northern Georgia. This would be a trip to collect on bald hilltops in the Chattahoochee-Oconee National Forest. I also received a small grant to do some additional collecting of Sarcophagidae associated with pitcher plants. I will be going on a trip to northern Florida and Alabama later this summer to do some collecting in the bog areas there. If it looks like I will be able to come this summer, I will write you to let you know and to apply for a collecting permit. If you think that I should reapply for the permit now, just let me know.

NOTE: Please return the Schmidt shipping box to me as soon as possible. This is my personal box and I only have a couple. Please return to my home address: 2114 Knightsbridge Dr.; Cincinnati, OH 45244. Thanks!

Best wishes!

A handwritten signature in black ink, appearing to read 'G. Dahlem', with a stylized flourish at the end.

Gregory A. Dahlem, PhD.
dahlem@fuse.net

**COLLECTIONS BY DR. GREGORY A. DAHLEM
GREAT SMOKY MOUNTAIN NATIONAL PARK
1999**

DATE	LOCATION	TAXA	# SPECIMENS	DEPOSITION	
V.28.99	Clingman's Dome & adjacent Appalachian Trail	<i>Calliphora vicina</i> Robineau-Desvoidy (Diptera: Calliphoridae)	1	GSMNP	O
		<i>Calliphora vomitoria</i> (Linnaeus) (Diptera: Calliphoridae)	8	GSMNP	C
		<i>Cynomya cadaverina</i> Robineau-Desvoidy (Diptera: Calliphoridae)	4	GSMNP	C
		<i>Phormia regina</i> (Meigen) (Diptera: Calliphoridae)	1	GSMNP	C
		<i>Sarcophaga (Mehria) houghi</i> Aldrich (Diptera: Sarcophagidae)	1	Dahlem	S
		<i>Sarcophaga (Neobellieria) triplasia</i> Wulp (Diptera: Sarcophagidae)	1	GSMNP	S
		Diptera: Muscidae	5	CLEMSON	
		Diptera: Anthomyiidae	2	CLEMSON	
		Diptera: Scathophagidae	1	CLEMSON	
		Diptera: Syrphidae	4	CLEMSON	
V.29.99	Trail to Brushy Mountain summit	Diptera: Tipulidae	1	CLEMSON	
		Diptera: Dryomyzidae	1	CLEMSON	
V.29.99	Summit of Brushy Mountain	<i>Calliphora vomitoria</i> (Linnaeus) (Diptera: Calliphoridae)	3	GSMNP	C
		<i>Stomoxys calcitrans</i> (Linnaeus) (Diptera: Muscidae)	2	GSMNP	M
		Diptera: Muscidae	6	CLEMSON	
		Diptera: Anthomyiidae	9	CLEMSON	
		Diptera: Scathophagidae	2	CLEMSON	
		Diptera: Syrphidae	8	CLEMSON	
		Diptera: Bombyliidae	1	CLEMSON	
		Diptera: Conopidae	1	CLEMSON	
V.29.99	Parking lot at base of Brushy Mountain (Malaise trap)	Diptera: Muscidae	2	CLEMSON	
		Diptera: Anthomyiidae	6	CLEMSON	
		Diptera: Dryomyzidae	1	CLEMSON	
		Diptera: Stratiomyidae	1	CLEMSON	
		Diptera: Xylomyidae	1	CLEMSON	
		Diptera: Lonchaeidae	1	CLEMSON	
VIII.17.99	Chimney Rocks near parking area	<i>Helicobia rapax</i> (Walker) (Diptera: Sarcophagidae)	1	GSMNP	S
		<i>Brachicoma sarcophagina</i> (Townsend) (Diptera: Sarcophagidae)	1	GSMNP	S
		<i>Microcerella</i> sp. (Diptera: Sarcophagidae)	1	GSMNP	S
		<i>Blaesoxipha</i> sp. (Diptera: Sarcophagidae)	1	Dahlem	S
		Diptera: Asilidae	2	CLEMSON	
VIII.18.99	Field & road near Purchase Knob	<i>Metopia</i> sp. (Diptera: Sarcophagidae)	2	Dahlem	S
		<i>Sphenometopa</i> sp. (Diptera: Sarcophagidae)	2	Dahlem	S
		<i>Senotainia trilineata</i> (Wulp) (Diptera: Sarcophagidae)	1	GSMNP	S
		<i>Oxysarcodexia ventricosa</i> (Wulp) (Diptera: Sarcophagidae)	1	Dahlem	S
		<i>Ravinia querula</i> (Walker) (Diptera: Sarcophagidae)	5	GSMNP	S
		<i>Musca autumnalis</i> De Geer (Diptera: Muscidae)	1	GSMNP	M
		Diptera: Conopidae	3	CLEMSON	
		Diptera: Bombyliidae	3	CLEMSON	
		Diptera: Syrphidae	4	CLEMSON	

DATE	LOCATION	TAXA	# SPECIMENS	DEPOSITION
VIII.18-19 .99	Path through pine tree plantation at base of Purchase Knob	<i>Blaesoxipha (Tephromyia) hunteri</i> (Hough) (Diptera: Sarcophagidae)	2	GSMNP
		<i>Sarcophaga (Bercaeopsis) ontariensis</i> Hall ? (Diptera: Sarcophagidae)	1	Dahlem
		<i>Sarcophaga (Neobellieria) triplasia</i> Wulp (Diptera: Sarcophagidae)	2	GSMNP
		<i>Ravinia querula</i> (Walker) (Diptera: Sarcophagidae)	29	GSMNP
		<i>Ravinia pusiola</i> (Wulp) (Diptera: Sarcophagidae)	2	GSMNP
		<i>Ravinia anxia</i> (Walker) (Diptera: Sarcophagidae)	1	GSMNP
		<i>Metopia</i> sp. (Diptera: Sarcophagidae)	1	Dahlem
		<i>Senotainia trilineata</i> (Wulp) (Diptera: Sarcophagidae)	3	GSMNP
		<i>Senotainia</i> sp. (Diptera: Sarcophagidae)	1	Dahlem
		<i>Lepidodexia (Johnsonia) rufitibia</i> (Wulp) (Diptera: Sarcophagidae)	1	Dahlem
		Diptera: Syrphidae	2	CLEMSON
		Diptera: Leptogastridae	1	CLEMSON
VIII.18-19 .99	Summit of Purchase Knob	<i>Boettcheria bisetosa</i> Parker (Diptera: Sarcophagidae)	5	GSMNP
		<i>Brachicoma sarcophagina</i> (Townsend) (Diptera: Sarcophagidae)	1	GSMNP
		<i>Helicobia rapax</i> (Walker) (Diptera: Sarcophagidae)	4	GSMNP
		<i>Ravinia querula</i> (Walker) (Diptera: Sarcophagidae)	8	GSMNP
		<i>Sarcophaga (Bercaeopsis) idonea</i> Aldrich ? (Diptera: Sarcophagidae)	1	Dahlem
		<i>Sarcophaga (Bercaeopsis) morosa</i> Aldrich ? (Diptera: Sarcophagidae)	28	Dahlem
		<i>Sarcophaga (Bercaeopsis)</i> sp. (Diptera: Sarcophagidae)	1	Dahlem
		<i>Sarcophaga (Neobellieria) triplasia</i> Wulp (Diptera: Sarcophagidae)	44	GSMNP
		<i>Sarcophaga (Robineauella) nearctica</i> Parker (Diptera: Sarcophagidae)	3	GSMNP
		Diptera: Muscidae	4	CLEMSON
		Diptera: Bombyliidae	2	CLEMSON
		Diptera: Syrphidae	15	CLEMSON
		Diptera: Scathophagidae	1	CLEMSON
		Diptera: Heleomyzidae	1	CLEMSON
		Diptera: Anthomyiidae	3	CLEMSON