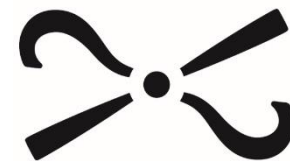




**Establishing a new beetle  
recording scheme:**

**Silphidae UK**

**Ashleigh Whiffin**



**National  
Museums  
Scotland**

# Why Silphids?





# Getting things started...

- Encouragement from fellow entomologists
- Help and guidance from Martin Harvey and Jodey Peyton at BRC
- Group discussion of plans for the scheme
- Set us up as verifiers on iRecord

# Identification:

## Key to species

1. Antennae with a clearly defined 4-jointed club (1)  
Antennae only gradually expanded towards the apex (2) 2  
8
2. Elytra entirely black (3)  
Elytra with large orange markings (4) 3  
4
3. Antennal club black. Elytral epipleura orange. *Nicrophorus germanicus* (doubtfully established)  
Antennal club reddish-yellow. Epipleura black. *Nicrophorus humator*
4. Antennal club entirely black. *Nicrophorus vespilloides*  
Last 3 segments of club orange 5
5. Hind tibia distinctly bent. (5) *Nicrophorus vespillo*  
Hind tibia straight (6) 6
6. Pronotum with golden pubescence. (7) *Nicrophorus vestigator*  
Pronotum glabrous (8) 7
7. All tergites with golden pubescence. Anterior orange band on elytra normally broadly interrupted at the suture. (9) *Nicrophorus interruptus*  
Only the last tergite with pubescence. Anterior orange band on elytra very narrowly interrupted across the suture (10) *Nicrophorus investigator*
8. Elytra orange with 4 black spots (11) *Dendroxena quadrimaculata*  
Elytra dark, usually black, sometimes reddish. 9
9. Pronotum orange, contrasting with elytra. (12) *Oiceoptoma thoracicum*  
Pronotum and elytra both dark. 10
10. Last 3 antennal segments yellowish. *Necrodes littoralis*  
Antennae completely dark. 11
11. Scutellum with some golden pubescence, remainder of upperside may also have obvious golden pubescence or not (13, 14) 12  
Upperside, including scutellum, without golden pubescence (15) 15
12. Anterior margin of pronotum not emarginate. Normally covered with dense pubescence. (13) *Aclypea opaca*  
Anterior margin of pronotum emarginate. Pubescence generally sparser and more scattered, may be confined to scutellum (14) 13



(13)



(14)



(15)



(16)



(17)



(18)



(19)



(20)



(21)



(22)



(23)



(24)

13. Interstices of elytra with raised tubercles or ridges (16) *Thanatophilus rugosus*  
Interstices of elytra smooth (17) 14
14. Elytra with a small shoulder tooth. Normally with less dense pubescence. (18) *Thanatophilus simianus*  
Elytra rounded at the shoulders. Normally with much denser pubescence. (19) *Thanatophilus dispar*
15. Elytra without ridges or raised lines. (20) *Silpha laevigata*  
Elytra with prominent ridges, or at least distinct raised lines (21, 22) 16
16. Head, especially mandibles, elongate. Front of pronotum rounded. Shining species, black or reddish. (23) *Silpha atrata*  
Head quadrate or transverse. Front of pronotum flatter. Duller. (24) 17
17. Second antennal segment twice as long as third. (Very rare species) *Aclypea undata*  
Second antennal segment about as long as third. 18
18. 8th antennal segment much longer than 9th. Pronotum distinctly emarginate anteriorly. (Very rare species) *Silpha carinata*  
8th antennal segment not longer than the 9th. Pronotum more or less flat in front. 19
19. Punctuation of elytra irregular. Segment 5 of antennae roundish, segment 6 transverse. (25) *Silpha tyrolensis*  
Punctuation of elytra more regular. Segment 5 of antennae elongate, segment 6 roundish. 20
20. Longitudinal lines on elytra strong. (26). More shining. Each elytral puncture with a tiny shining tubercle in front of it. *Silpha tristis*  
Longitudinal lines on elytra weak. Dull species. Elytral punctures without tiny shining tubercles in front. *Silpha obscura*



(16)



(17)



(18)



(19)



(20)



(21)



(22)



(23)



(24)



(25)



(26)



(27)



## Species with orange markings

Club of antenna black (all other species have last three segments orange).  
(No yellow hairs on thorax.)



*N. vespilloides*  
Common

Long yellow hairs at front margin of thorax.



Tibia of hind leg bent.  
Long yellow hairs only  
at front of thorax

*N. vespillo*  
Common



Tibia of hind leg straight.  
Long yellow hairs over much  
of thorax

*N. vestigator* Scarce

Species with no yellow hairs on the thorax and partly orange antennal clubs



*N. investigator*  
Quite common

Front orange band on  
elytra more or less  
continuous.

Front orange band on  
elytra broadly interrupted  
to form two separate marks



*N. interruptus*  
Local

# Current work:

- Verifying records
- Producing an updated version of the Key
- Field guide
- Encouraging more people to record this group [via social media]
- Collections visits to extract data from museum specimens





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# Verification: Records with images



## Verify

Filter: Select filter...

Apply

Reset

Create a filter

Review grid

Review tick list

Records	Log
2404313 23 42	Nicrophorus investigator
2390073 23 257	Nicrophorus investigator
2382549 23 42	Nicrophorus vespillo
2372032 23 257	Nicrophorus
2340154 23 42	Nicrophorus investigator
2326077 23 257	Silpha atra
2317421 23 257	Silpha tristis
2317413 23 257	Silpha tristis
2280845 23 42	Nicrophorus vespilloides
2271340 23 257	Thanatophorus sinuatus
2264181 68 330	Nicrophorus vespillo
2240341 23 42	Silpha tristis
2237449 23 42	Nicrophorus vespilloides
2237443 23 42	Thanatophorus rugosus
2237344 23 42	Necrodes littoralis
2214838 23 42	Nicrophorus vespilloides
2210688 68 240	Nicrophorus vespillo
2209815 23 42	Silphidae
2188339 23 42	Nicrophorus interruptus
2157678 23 257	Thanatophorus rugosus



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Map data ©2016 Google Imagery ©2016 TerraMetrics Terms of Use Report a map error

Set status: [less] [✓] [✓] [?] [✗] [✗✗]

Other actions: [Queue] [Cancel] [Set to accepted::correct] [Edit]

Details Experience Phenology Media Comments

**Key facts**

Species	Silpha tristis
Record status	Not reviewed
Recorder	Jewels, Andrew
Map ref.	SS14284376
Output map ref.	SS14284376
Site Name	Lundy
Date	2015-07-05

**Record**

ID	2240341
Submitted on	2015-07-28 18:54:25
Last updated on	2016-01-02 15:14:29
Survey	iRecord general data

**Record attributes**

Certainty	Likely
Quantity	1
Sex	not recorded
Stage	adult

These records are verified as "correct"





# Verification: Records without images



## Verify

Filter: Select filter...

Review tick list

Records Log

2122269 Silpha atrata Black Snail Beetle

Source ID: 23|42

Site name: Scows, St Margarets Hope

Images:

2108919 Oiceoptoma thoracicum Red-Breasted Carrion Beetle

2099668 Necrodes littoralis Shore Sexton Beetle

2095757 Silpha tristis

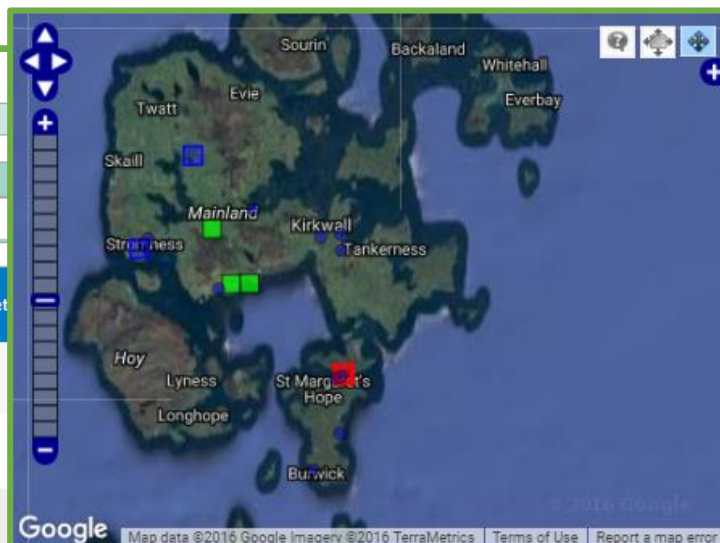
2095041 Nicrophorus vespillo Common Burying Beetle

2090392 Silpha atrata Black Snail Beetle

2086348 Oiceoptoma thoracicum Red-Breasted Carrion Beetle

2086304 Dendroxena quadrimaculata

2084750 Nicrophorus investigator



Set status: [less]



Other actions:



Set to accepted::considered correct

Details Experience Phenology Media Comments

### Key facts

Species Silpha atrata  
Record status Not reviewed  
Recorder Johnson, Lee  
Map ref. ND466945  
Output map ref. ND466945  
Site Name Scows, St Margarets Hope  
Locality Orkney  
Date 2015-07-05

### Record

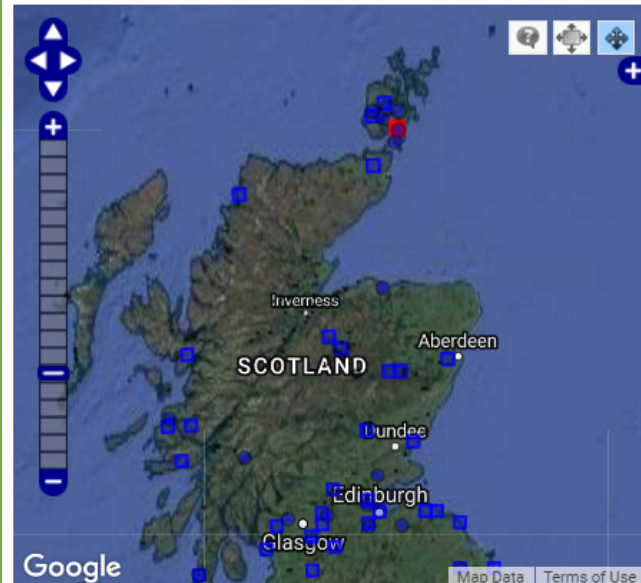
ID 2122269  
Submitted on 2015-07-06 19:45:46  
Last updated on 2015-07-06 19:45:46  
Sample comment red form  
Survey iRecord general data

### Record attributes

Certainty Certain  
Sex not recorded  
Stage not recorded  
Identified By Johnson, Lee

### Sample attributes

First name Lee  
Recorder Name Johnson, Lee  
CMS Username Lee Johnson  
EUNIS Habitat Gardens and parks  
Last name Johnson



Set status:



[less]

Other actions:



Details Experience Phenology Media Comments

### Key facts

Species Silpha atrata  
Record status Not reviewed

These records are verified as "considered correct" ✓

# Social Media...



Ashleigh Whiffin  
For a simple ID  
Richard Wright (



Jordan Rainey and 3 others liked

**Adrian Dutton** @TBeetles · Sep 25  
One for the connoisseur, Nicrophorus vespilloides on dog excrement!  
@AshWhiffin #silphidaesunday @silphidaeuk



1 1 5 ...



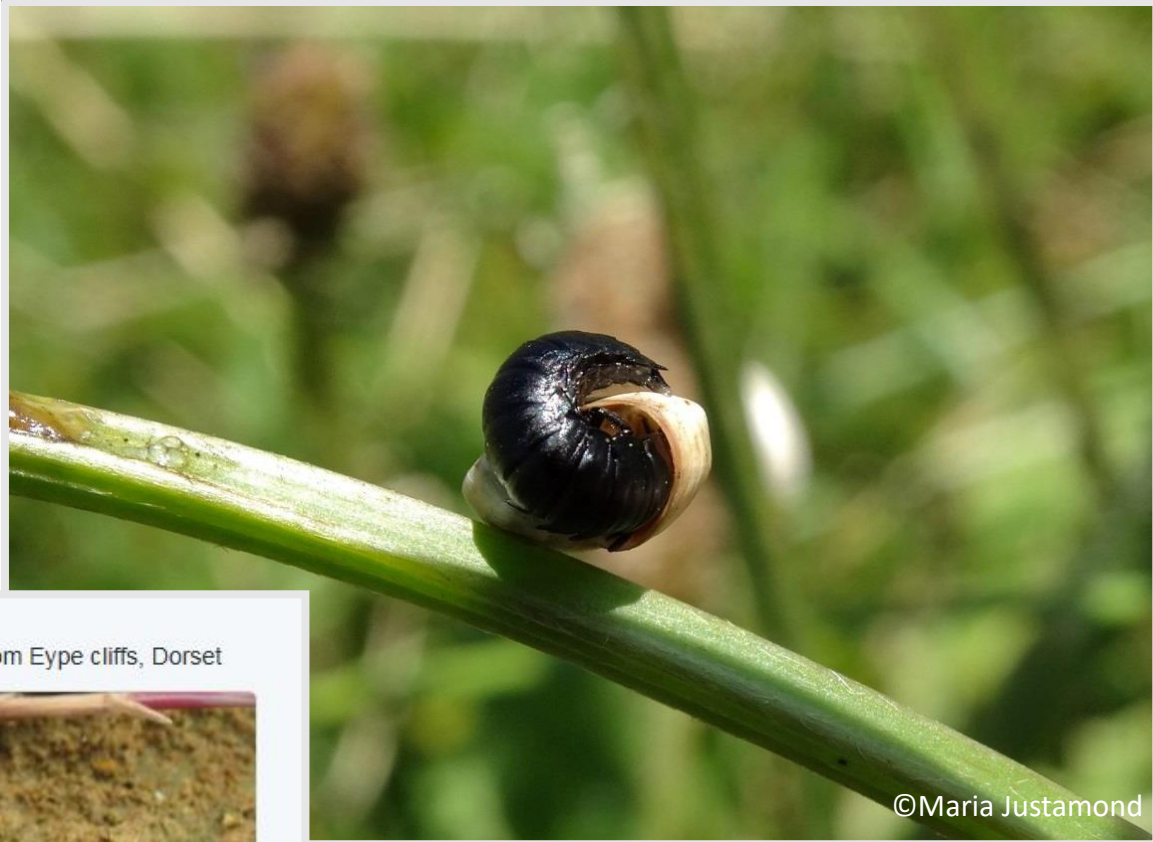


# Museum Collections: Extracting Records





# What about the larvae?

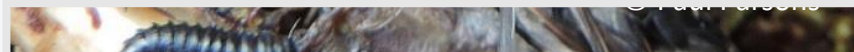


Steven Falk @StevenFalk1 · Sep 25

@AshWhiffin @SilphidaeUK Is this a Silpha larva too? From Eype cliffs, Dorset



1 9





# Future Work:

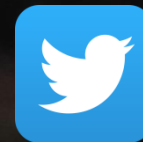
- Continue to raise awareness & recruit more recorders
- New field guide and key to larvae (2017/2018)
- Update distribution maps/Silphidae Atlas



# SILPHIDAE NATIONAL RECORDING SCHEME



[silphidae@brc.ac.uk](mailto:silphidae@brc.ac.uk)



@SilphidaeUk  
@AshWhiffin

**The scheme would like to thank:** Martin Harvey (BRC), Jodey Peyton (BRC), Darren Mann (OUMNH), Max Barclay (NHM), Tony Hunter (WML), Bonnie Griffin (Bristol Museum), Jeanne Robinson (The Hunterian), Richard Loxton... and everyone who has submitted records so far!