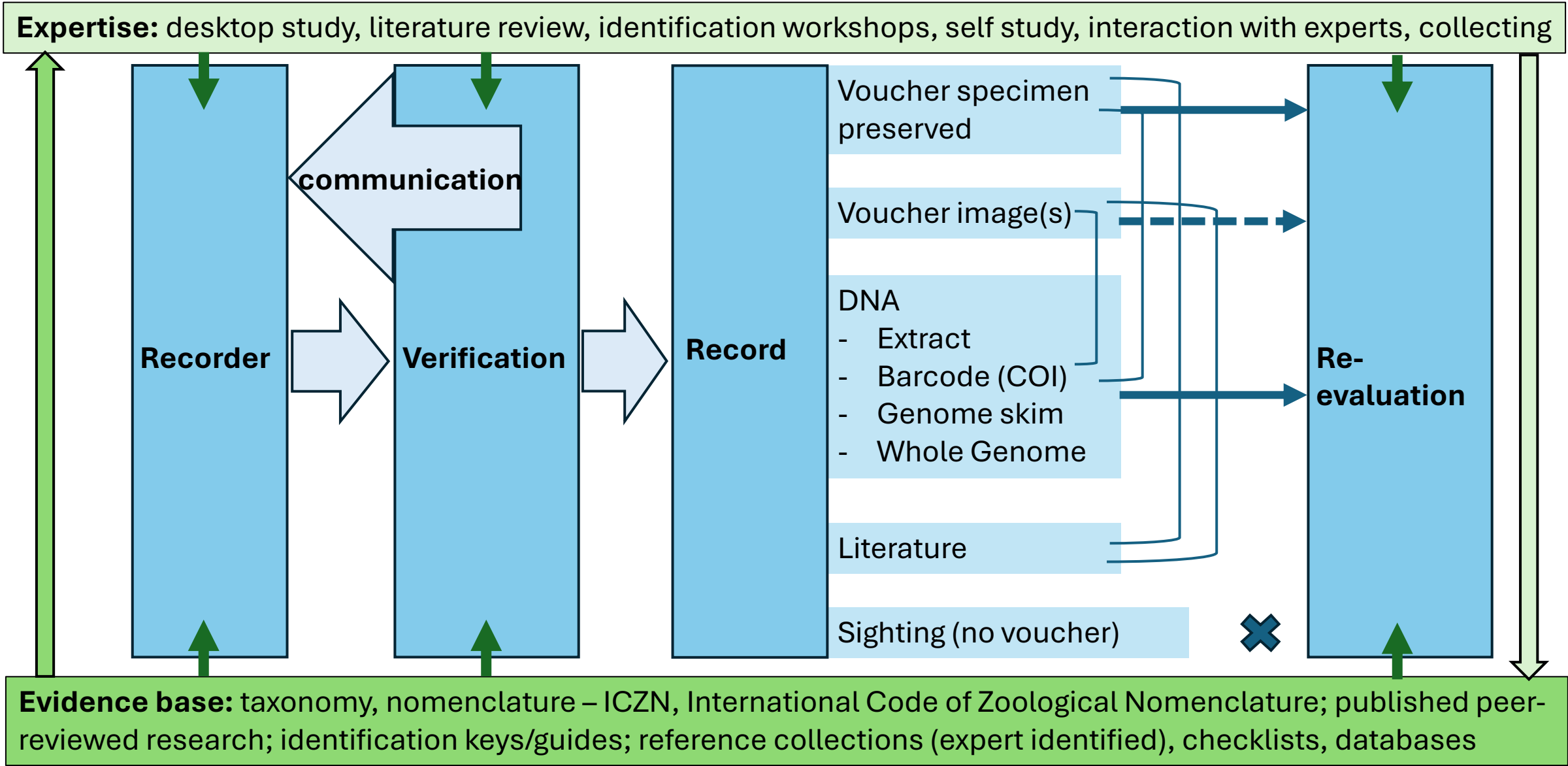


**Calliphoridae
and Polleniidae
Recording
Scheme**

Olga Sivell

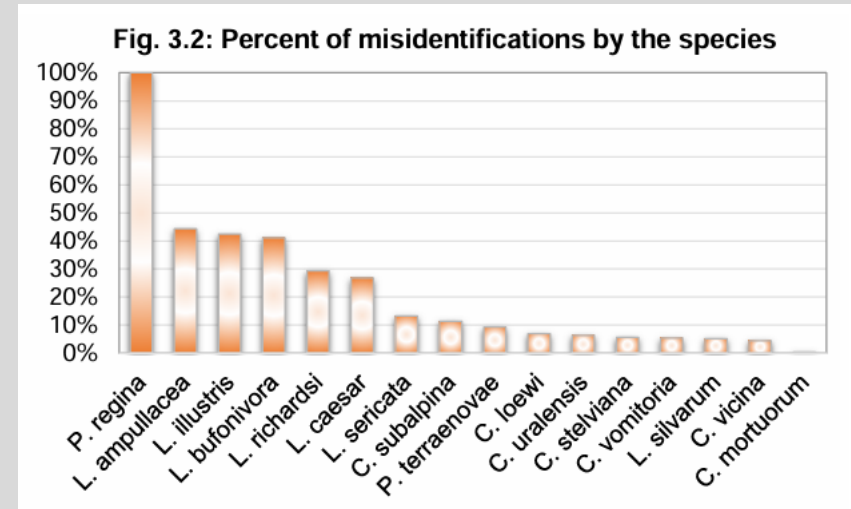
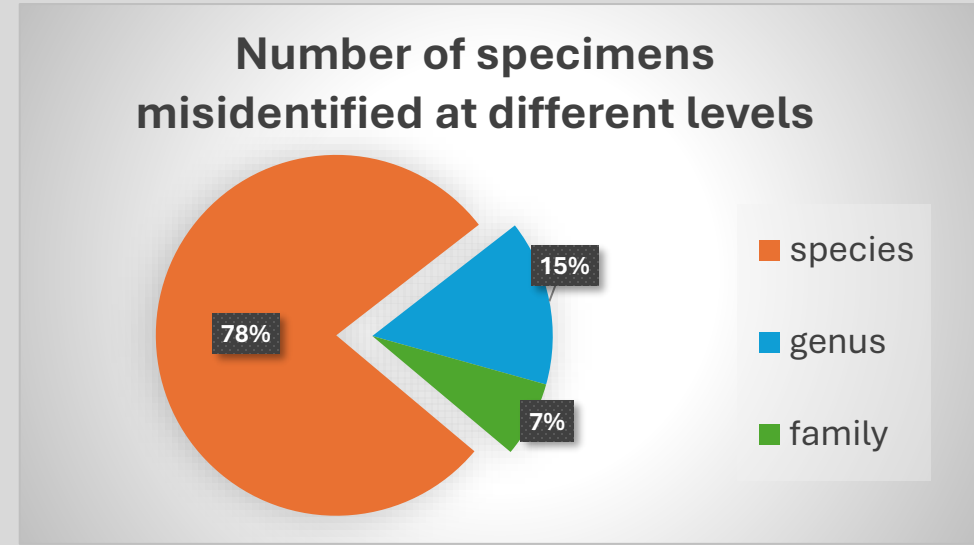
Photograph by Ian Andrews





Misidentifications

Collection	% of misidentified specimens
Birmingham Museum and Art Gallery*	< 5%
Booth Museum of Natural History in Brighton	> 10%
National Museum of Wales in Cardiff	> 5%
Cambridge University Museum of Zoology	> 10%
National Museum of Scotland in Edinburgh	< 5%
National Museums Liverpool	> 25%
Oxford University Museum of Natural History	< 5%



*Data incomplete – only 5 species were assessed: *C. subalpina*, *L. caesar*, *L. sericata*, *L. silvarum*, *P. terraenovae*;
 Natural History Museum in London has been excluded from this study

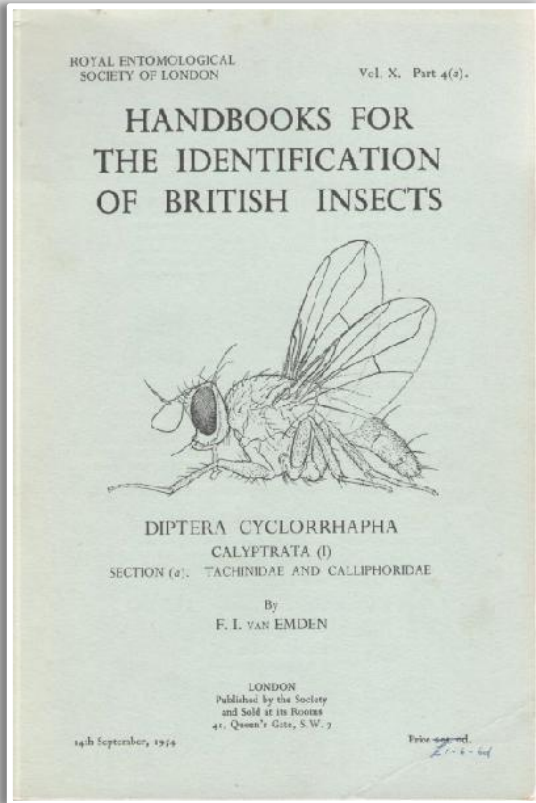
Most often misidentified species:
Phormia regina – all specimens
Lucilia ampullacea, *Lucilia illustris*,
Lucilia caesar
Lucilia richardsi, *Lucilia sericata*



*Keys are compiled
by those who do not need them
for those who cannot use them.*

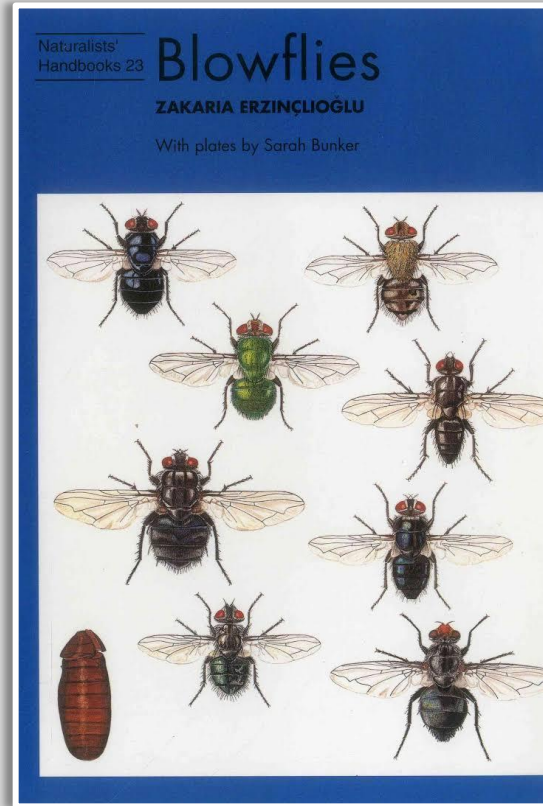
(Lobanov, 2003).

Identification keys to British blow flies



- out of date: taxonomy
- some characters used in the key are not well explained or illustrated

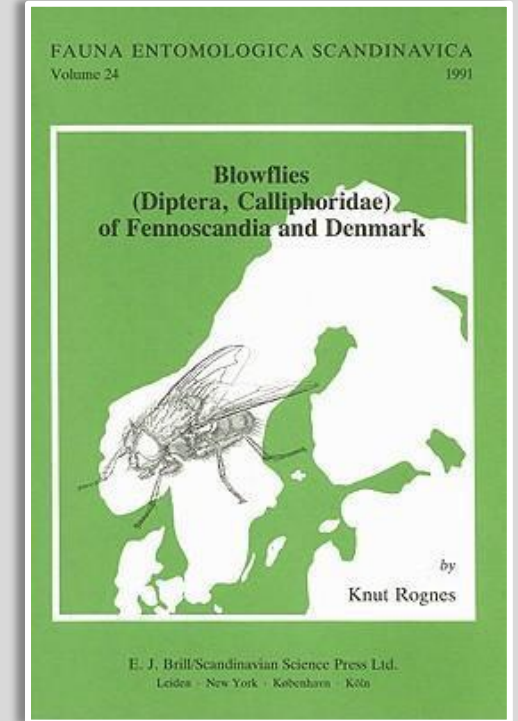
Emden (1954)



Erzinçlioğlu (1996)

- only identifies males
- out of date: taxonomy follows the checklist by Kloet and Hinks (1976)
- characters used in the key are not well explained or illustrated
- Most couplets with only one character

Also:



Rognes (1991)

- very limited availability

Currently recognised species name	Erzinçlioğlu (1996)	Emden (1954)
<i>Protophormia terraenovae</i>	<i>Phormia terraenovae</i>	<i>Phormia terraenovae</i>
<i>Calliphora vicina</i>	<i>Calliphora vicina</i>	<i>Calliphora erythrocephala</i>
<i>Calliphora subalpina</i>	<i>Calliphora subalpina</i>	<i>Acrophaga subalpina</i>
<i>Calliphora stelviana</i>	<i>Calliphora alpina</i>	<i>Acrophaga alpina</i>

Sivell, O. 2021. Blow flies (Diptera: Calliphoridae, Polleniidae, Rhiniidae).
Handbooks for the Identification of British Insects **10** (16). Royal Entomological Society.



Sivell (2021: 26)

Male genitalia – genus <i>Lucilia</i> (continued)					
Description	Drawing	Posterior view	Lateral view	Species	
Cerci wide, sheep shears-shaped	Surstyli with abundant long, pale, curly hairs				<i>Lucilia ampulloacea</i> (p. 108)
	Surstyli with short and finely straight hairs; strongly diverging distally				<i>Lucilia sericata</i> (p. 117)
Surstyli short and stout	Surstyli with protuberances at distal end				<i>Lucilia caesar</i> (p. 110)
	Cerci narrow	Surstyli narrow in distal part; cerci with 'hook' at distal end in profile			
	Surstyli wide and blunt; cerci without protuberances at distal end				<i>Lucilia richardsi</i> (p. 115)

Sivell (2021: 77)

Encouraging new recorders in taxonomically difficult groups

- Taxonomically difficult groups – what are they and what makes them difficult? Can we make them easier? Calliphoridae used to be considered difficult, but get recorded more and more now that you can identify them easily; some groups however need the specimens to be examined under the microscope or even genitalia checked – how do we deal with that?
- Vouchering
- AI for id – should we just ask for pictures and use software to sort things? Limitations
- DNA barcoding – pros and cons; COI does not give the answers for some species groups, BOLD does not store other barcodes; genome sequencing is too expensive; data quality on genetic databases is not always great – species misidentified; taxonomy is not valued enough to be included in research grants. We need a good system for vouchered sequences – BGE and UK BoL work well – using material from museums or being donated to museums. But who will deal with the workload? Digitisation – good quality images to aid id verification. What would be the most cost-effective way?
- Investing in visual guides and easy to interpret identification tools – pictures, pictures, pictures; re-think identification process to make it more accessible to novices;
- produce a recording guide? Communication of what will improve verification and vouchering