

## Supplementary Table 1.

### Review of Prior DNA Barcode Library Construction Methods:

To explore construction methods for studies that suggest, or indicate creation of a DNA Barcode library, we performed a literature search via a Web of science "Topic Search" (periodically, from October 2013 - March 2014) using the keywords:

DNA Barcode Librar\*  
DNA Reference librar\*  
Barcode reference librar\*  
Barcode librar\*  
Barcode ref\*.

For each publication we subjectively evaluated the scope, taxa involved, and categorized each work into general patterns of construction.

### Results:

We find 41 citations, spanning the past five years that explicitly discuss creation of a DNA Barcode Reference Library, presented in Supplementary Table 5 (below). Of these, approximately half precede with an a priori taxonomic catalogue, whereas others generate a post-hoc list from the study's results. Most studies take place at taxon, or taxon-by-region scales (country or below), while a few are continental (3) and global (1) in scope. Overall, there is a clear taxon bias toward Insects (19 studies), toward fish among vertebrates (7/10 studies) and a pioneering representation for community assemblages.

	Taxon	A priori catalogue	Catalogue format	Citation
Insects	Lepidoptera of Germany	Yes	Current regional catalogue	[1]
	Lepidoptera of Australia	No	Survey of a Natural History Collection	[2]
	Butterflies of Malaysia	No	Survey of a Natural History Collection	[3]
	Butterflies of Romania	Yes	Origin not stated	[4]
	Geometrids of Bavaria	Yes	Current regional Catalogue	[5]
	Geometrids of British Columbia	Yes	Composite catalogue, unpublished	[6]
	Noctuidae from Canada	Yes	Composite catalogue, published within citation	[7]
	The Genus <i>Lymantria</i>	Yes	Current catalogue for Genus	[8]
	North American Ephemeroptera	Yes	Current regional catalogue	[9]
	Ephemeroptera, Plecoptera, and Trichoptera of Churchill	Yes	Composite catalogue, published with reference	[10,11]
	Trichoptera of a National Park	Yes	Current Global Catalogue	[12]
	Leaf Beetle community in Costa Rica	No	Regional sampling with post-hoc identification	[13]
	Mosquitoes & Carabid beetles	No	Regional sampling with post-hoc identification	[14]
	Scale Insects	No	Regional sampling, with post-hoc identification	[15]
	Solitary Bees of Ireland	Yes	Unpublished, but recognized catalogue	[16]
	Korean food-pest insects	No	Regional sampling with post-hoc identification	[17]
	Survey of Tephritid Flies	No	Global sampling, with post-hoc identification	[18]
	Chironomidae of Korea	No	Regional sampling with post-hoc identification	[19]
	Syrphidae of a Greek Island	Yes	Catalogue published with reference	[20]
	Spiders	European Spiders	No	Survey of a Natural History Collection
Spiders of Churchill		No	Regional sampling with post-hoc identification, catalogue published within citation	[22]
Vertebrates	Continental-scale Bird Diversity	Yes	Current regional catalogue	[23]
	Neotropical Bats of the Royal Ontario Museum	No	Survey of a Natural History Collection	[24]
	Herpetofauna of Korea	No	Origin not stated	[25]
	Global Fish Diversity	Yes	Current Global Catalogue	[26]
	Marine Fishes of Portugal	No	Regional sampling with post-hoc identification	[27]
	Marine Aquarium Fishes	Yes	Current Global Catalogue	[28]
	Cyprinid Aquarium Fishes	Yes	Current, taxon-related catalogues	[29]
	Marine and Brackish fishes of Argentina	No	Regional sampling with post-hoc identification	[30]
	Freshwater fishes of North America	Yes	Current regional catalogue	[31]
	Marine Fishes of São Paulo, Brazil	Yes	Current regional catalogue	[32]
Vascular Plants	Plants and Conifers of Wales	Yes	Survey of Natural History Collection	[33]
	Plants of a Panamanian Forest Plot	Yes	Survey of a Natural History Collection	[34]
	Roots of a Panamanian Forest Plot	Yes	Survey of a Natural History Collection	[35]
	Vascular Plants of Churchill	Yes	Current regional catalogue	[36]
Algae	Red Algae of Canada and France	No	Regional sampling with post-hoc identification	[37]
	Crustose Brown Algae	Unknown		[38]
Community Assemblages	Freshwater macroinvertebrates	No	Survey of a Natural History Collection	[39]
	Marine macroinvertebrates	Yes	Published catalogue	[40]
	Arctic food web	Yes	Regional sampling with post-hoc identification	[41]
	Island, and reefs of Mo'orea	No	Regional sampling with post-hoc identification	<a href="http://www.moor-eabiocode.org/">http://www.moor-eabiocode.org/</a>

### Citations for Supplementary Table 1:

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