# **EVERYTHING\*** you ever wanted to know about SAMPLING-EVENT DATA

## \*but were afraid to ask

By providing access to more than 700 million occurrences available through GBIF.org, Darwin Core (DwC) has become established as the standard for presenting evidence on 'what, where and when' for the presence of species in space and time.

**EU BON** has supported improvement to DwC Standard that accommodate sampling-event data, addressing the shortcomings of DwC occurrence data for monitoring biodiversity trends and improving tools and data access for initiatives like IPBES and GEO BON by adding:



The sampling-event core provides a standardized structure for communicating and sharing data from monitoring surveys and inventories.



DATA ON ABUNDANCE, whether individual counts, per cent biomass, dry mass, area coverage...

#### Information that improves the ability to infer the SIGNIFICANCE OF ABSENCE

		Species	Even	t	Quantity	Sample size	Protocol	
		Vanessa d	<i>cardui</i> Plot <i>A</i>	-2014-06	6 individuals	s 1 km	Butterfly transe	ot
		Aglais urt	<i>icae</i> Plot <i>A</i>	-2014-06	4 individuals	s 1 km	Butterfly transe	ct
	Species	Ever	nt (	Quantity	Sample s	ize Protocol	<sup>-</sup> ly transe	et
	Vanessa ca	<i>rdui</i> Plot	A-2014-07 3	3 individual	s 1 km	Butterfly tra	ansect	
	Aglais urtica	ae Plot	A-2014-07 8	3 individual	s 1 km	Butterfly tra	ansect	
	Thecla betu	<i>lae</i> Plot	A-2014-07 2	2 individual	s 1 km	Butterfly tra	ansect	
Species	Event		Quantity	Sample s	ize Protoco		n. City	Вря
Pieris rapae	PlotA-	2014-06	6 individuals	1 km	Butterfly	y transect	221/18.2	
Aglais urtica	e PlotA-	2014-06	4 individuals	1 km	Butterfly	y transect	· · · · ·	
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Pieris Vanes	rapae ssa cardui	Event PlotB-2014 PlotB-2014	Quantit -06 12 indiv -06 8 individ	y Sa riduals 1 k duals 1 k	mple size P xm B xm B	rotocol utterfly transect utterfly transect		NOT COMPARABLE
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Pieris Vanes Aqlais Species Pieris rapad Vanessa ca Aqlais urtic	rapae ssa cardui s urticae e PlotB ardui PlotB cae PlotB	Event PlotB-2014 PlotB-2014 PlotB-2014 t 3-2014-06 3-2014-07 3-2014-08	Quantit-0612 individ-068 individ-063 individ-063 individ4 individuals1 individual1 individual1 individual	iduals 1 k duals 1 k duals 1 k Sample s 1 km 1 km 1 km	mple size P m B m B m B m B m B m B m B m B	rotocol utterfly transect utterfly transect utterfly transect col rfly transect rfly transect rfly transect Spra	ecies Evention flesus Di attus sprattus Di	NOT COMPARABLE           Lett Matter: OpenSteedMate contracts           vent         Quantity         Sample size         Protocol           veX-20120301         3 individuals         500 m <sup>2</sup> Fish dive survey           veX-20120301         71 individuals         500 m <sup>2</sup> Fish dive survey
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- dwc:sampleSizeValue dwc:siteTreatment dwc:samplingTaxaRange
- dwc:samplingEffort

#### Occurrence

# Occurrence

Occurrence dwc:scientificName dwc:individualCount dwc:organismQuantity

- dwc:individualID
- dwc:recordedBy
- dwc:basisOfRecord

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Relevant fields with locations in Darwin Core Archive files								
eml:studyExtent	Metadata	dwc:siteTreatment	Event					
eml:samplingDescription	Metadata	dwc:sampleSizeValue	Event					
eml:qualityControl	Metadata	dwc:samplingTaxaRange	Event					
eml:temporalCoverage	Metadata	dwc:samplingEffort	Event					

eml:taxonomicCoverage	Metadata	dwc:scientificName	Occurrences
eml:creators	Metadata	dwc:individualCount / dwc:organismQuantity	Occurrences
dwc:samplingProtocol	Event	dwc:individualID	Occurrences
dwc:habitat	Event	dwc:recordedBy	Occurrences
dwc:locationID / dwc:siteID	Event	dwc:basisOfRecord	Occurrences

## WHAT ELSE IS NEEDED?

Many datasets already published as occurrence datasets do contain richer information—particularly those captured as part of carefully planned, structured surveying programmes that

### **REVISIT AND RESAMPLE** locations over time

Are comparable to **SIMILAR SURVEYS** at other sites

## Collect **ADDITIONAL MEASURES** like *abundance*, *level of effort, standard methodologies* and *protocols*





- A consistent, referenced catalogue of sampling protocol definitions
- New proposed DwC terms
- More extensive and improved documentation for publishers

## Humboldt Core catalogue?

Proposed standard could allow robust reasoning across datasets and link through the dwc:samplingProtocol field

## LEARN MORE

v2.3 (Latest version)

Download

Structuring this information as a DwC sampling-event dataset will enable data users, tool builders, policy makers and others to:

#### Discern patterns more quickly

#### Support new discovery and comparison services



## gbif.org/sites/default/files/gbif\_IPT-sample-data-primer\_en.pdf

### github.com/gbif/ipt/wiki/samplingEventData

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Along with serving millions of occurrence records, GBIF's free open-source IPT is the only tool available for publishing samplingevent data

