

## **Sampling efficiency, bias and shyness in funnel trapping aquatic newts**

Jan W. Arntzen\*, Annie Zuiderwijk

Naturalis Biodiversity Center, Leiden, The Netherlands

\*Corresponding author; e-mail: pim.arntzen@naturalis.nl

### **Supplementary material**

**Table S1.** Estimates on catchability for five species of newts in France (a - *Ichthyosaura alpestris*, c - *Triturus cristatus*, h - *Lissotriton helveticus*, m - *T. marmoratus* and v – *L. vulgaris*) for M - males and F – females. Catchabilities ( $p$ ) at unity result from the count method and  $p$ -values  $<1$  are obtained with the Moran method (details see text).

Pond	Year	Species	Sex	$p$
1	2012	a	F	0.091
1	2012	a	M	0.354
1	2012	h	F	0.173

1	2012	h	M	0.128
1	2012	v	F	0.095
1	2012	v	M	0.161
2	2009	h	F	0.077
2	2009	h	M	0.097
2	2009	m	F	0.093
2	2009	m	M	0.632
2	2010	h	F	0.475
2	2010	h	M	0.532
2	2010	m	F	1
2	2010	m	M	0.778
2	2011	h	F	0.565
2	2011	h	M	0.640
2	2011	m	F	
2	2011	m	M	0.556
2	2012	h	F	0.691
2	2012	h	M	0.760
2	2012	m	F	
2	2012	m	M	1
2	2013	h	F	0.448
2	2013	h	M	0.506
2	2013	m	F	0.692
2	2013	m	M	0.765

2	2014	h	F	0.411
2	2014	h	M	0.442
2	2014	m	F	
2	2014	m	M	0.588
2	2015	h	F	0.397
2	2015	h	M	0.414
2	2015	m	F	1
2	2015	m	M	1
2	2016	h	F	0.473
2	2016	h	M	0.560
2	2016	m	F	1
2	2016	m	M	0.923
2	2017	h	F	0.234
2	2017	h	M	0.387
2	2017	m	F	
2	2017	m	M	0.857
2	2018	h	F	0.522
2	2018	h	M	0.561
2	2018	m	F	0.875
2	2018	m	M	0.944
2	2019	h	F	0.462
2	2019	h	M	0.574
2	2019	m	F	0.900

2	2019	m	M	0.591
3	2009	c	F	0.389
3	2009	c	M	0.294
3	2009	h	F	0.353
3	2009	h	M	
3	2009	v	F	
3	2009	v	M	0.188
3	2010	c	F	0.714
3	2010	c	M	0.714
3	2010	h	F	0.500
3	2010	h	M	0.467
3	2010	v	F	0.500
3	2010	v	M	0.594
3	2011	c	F	0.863
3	2011	c	M	1
3	2011	h	F	
3	2011	h	M	1
3	2011	v	F	
3	2011	v	M	0.833
3	2012	c	F	0.604
3	2012	c	M	0.769
3	2012	h	F	0.522
3	2012	h	M	0.522

3	2012	v	F	
3	2012	v	M	
3	2013	c	F	0.836
3	2013	c	M	0.750
3	2013	h	F	0.345
3	2013	h	M	0.233
3	2013	v	F	0.478
3	2013	v	M	0.611
3	2014	c	F	0.187
3	2014	c	M	0.209
3	2014	h	F	0.033
3	2014	h	M	0.097
3	2014	v	F	0.031
3	2014	v	M	0.197
3	2015	c	F	0.608
3	2015	c	M	0.582
3	2015	h	F	0.274
3	2015	h	M	0.307
3	2015	v	F	0.224
3	2015	v	M	0.311
3	2016	c	F	0.430
3	2016	c	M	0.510
3	2016	h	F	0.229

3	2016	h	M	0.450
3	2016	v	F	0.281
3	2016	v	M	0.590
3	2017	c	F	0.367
3	2017	c	M	0.174
3	2017	h	F	0.065
3	2017	h	M	0.281
3	2017	v	F	
3	2017	v	M	0.382
3	2018	c	F	0.697
3	2018	c	M	0.705
3	2018	h	F	0.475
3	2018	h	M	0.569
3	2018	v	F	
3	2018	v	M	0.407
3	2019	c	F	0.565
3	2019	c	M	0.629
3	2019	h	F	0.389
3	2019	h	M	0.369
3	2019	v	F	0.446
3	2019	v	M	0.944
4	2009	c	F	0.459
4	2009	c	M	0.482

4	2009	h	F	0.416
4	2009	h	M	0.603
4	2009	m	F	0.270
4	2009	m	M	0.346
4	2010	c	F	0.868
4	2010	c	M	0.893
4	2010	h	F	0.336
4	2010	h	M	0.468
4	2010	m	F	1
4	2010	m	M	0.939
4	2011	c	F	0.828
4	2011	c	M	0.742
4	2011	h	F	0.314
4	2011	h	M	0.488
4	2011	m	F	0.600
4	2011	m	M	0.792
4	2012	c	F	0.571
4	2012	c	M	0.458
4	2012	h	F	
4	2012	h	M	
4	2012	m	F	0.260
4	2012	m	M	0.625
4	2013	c	F	0.125

4	2013	c	M	0.789
4	2013	h	F	0.044
4	2013	h	M	0.429
4	2013	m	F	0.667
4	2013	m	M	0.671
4	2014	c	F	0.667
4	2014	c	M	0.434
4	2014	h	F	0.253
4	2014	h	M	0.367
4	2014	m	F	0.632
4	2014	m	M	0.857
4	2015	c	F	0.756
4	2015	c	M	0.944
4	2015	h	F	0.656
4	2015	h	M	0.750
4	2015	m	F	1
4	2015	m	M	1
4	2016	c	F	0.824
4	2016	c	M	0.624
4	2016	h	F	0.283
4	2016	h	M	0.238
4	2016	m	F	0.750
4	2016	m	M	0.762

4	2017	c	F	0.864
4	2017	c	M	0.929
4	2017	h	F	0.322
4	2017	h	M	0.369
4	2017	m	F	
4	2017	m	M	1
4	2018	c	F	0.852
4	2018	c	M	0.739
4	2018	h	F	0.390
4	2018	h	M	0.612
4	2018	m	F	1
4	2018	m	M	1
4	2019	c	F	1
4	2019	c	M	0.867
4	2019	h	F	0.379
4	2019	h	M	0.467
4	2019	m	F	1
4	2019	m	M	0.857
5	2010	h	F	0.624
5	2010	h	M	0.667
5	2010	m	F	0.933
5	2010	m	M	0.903
5	2011	h	F	0.140

5	2011	h	M	0.396
5	2011	m	F	0.848
5	2011	m	M	0.642
5	2016	h	F	
5	2016	h	M	
5	2016	m	F	0.392
5	2016	m	M	0.609