

Additional file 1

Table S1. The details of data selection conducted before analyses.

No.	Mistakes or data deficient	Treatment	Data included
1	Some species names were mistakenly categorized as ‘accepted’ instead of ‘unaccepted’.	Their taxonomic name status was altered to ‘unaccepted’.	No
2	Some species were mistakenly categorized as ‘recent only’ instead of ‘fossil only’.	Their status was altered to ‘fossil only’.	No
3	Some species were without information about status because the species names had not been verified by taxonomic editors.	The records were removed from the list.	No
4	Some species without information about stratigraphic status, but they were assessed as unlikely to be fossil only.	Their status was altered to ‘stratigraphic status lacking.’	Yes
5	Some species not assigned to family. After a further investigation, their taxonomic name status was not determinable (larval or enigmatic), or their existing status was ‘fossil only’.	The records were removed from the listing, or their status was altered to ‘fossil only’ (fossils often have no family).	No
6	Family Ctenodrilidae was reassigned at WoRMS to be a <i>taxon inquirendum</i> subsequent to the data download.	Valid members of this family were moved to the family Cirratulidae.	Yes
7	Typographical errors or spelling variants were found in author names.	The name of those authors was corrected or standardised as far as possible.	Yes
8	Different contemporaneous authors were found to have the same surname.	Different authors with the same surname were distinguished.	Yes
9	Some species names without information about author(s), but they fulfill the categories of ‘accepted’, ‘verified by taxonomic editors’ and ‘not fossil only’.	We attempted to find the author name(s) of those species. Yet, a number of species were left anonymous (without author information).	Yes

Table S2. Data selection from WoRMS for the present analyses.

Row	Status	Category	Species number	Percent
1	Accepted	Accepted, but not verified	204	1
2	Accepted	Accepted, verified, recent	10310	49
3	Accepted	Accepted, verified, but fossil only	499	2
4	Accepted	Accepted, verified, recent but also fossil record	9	0
5	Accepted	Accepted, verified, stratigraphic status lacking	1137	5
6	Unaccepted	Synonyms and errors	8100	38
7	Unaccepted	Alternative names representation	295	1
8	Unaccepted	Interim unpublished	12	0
9	Unaccepted	<i>Nomen dubium</i>	254	1
10	Unaccepted	<i>Nomen nudum</i>	62	0
11	Unaccepted	<i>Taxon inquirendum</i>	221	1
12	Unaccepted	Temporary	1	0
Total number of names			21104	100
Total relevant for analysis (rows 2, 4, 5)			11456	
Total excluded			9648	

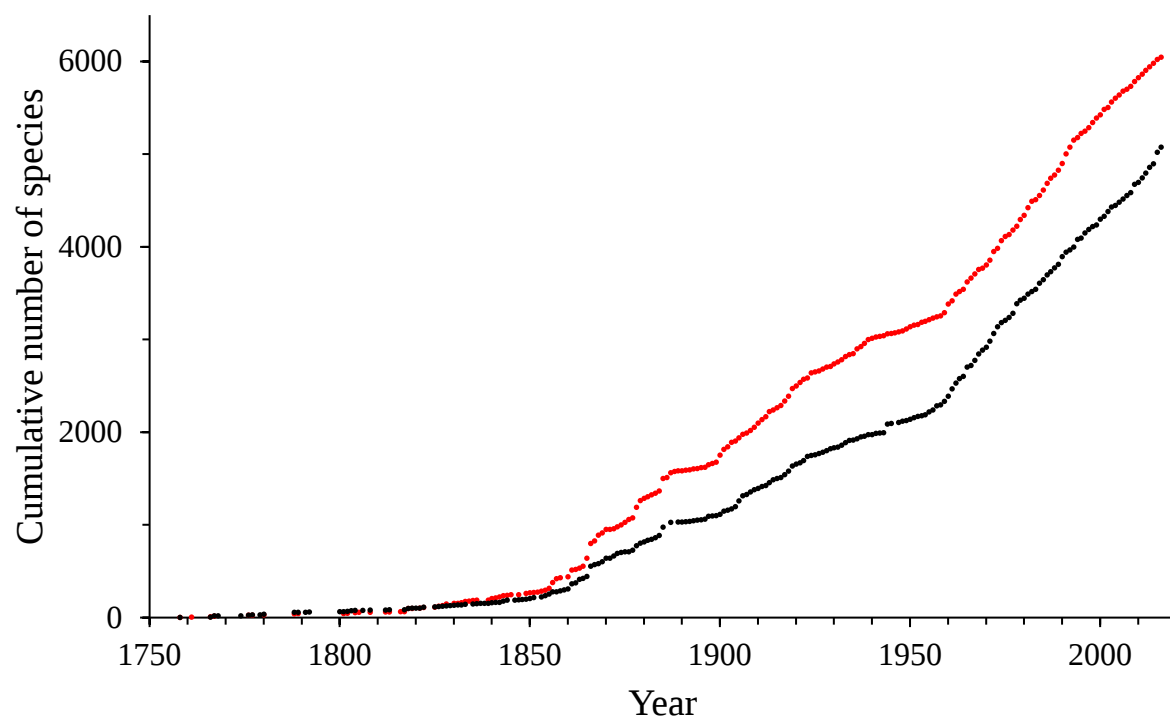


Figure S1. Cumulative number of errant (red dots) and sedentary (black dots) polychaete species described over time.

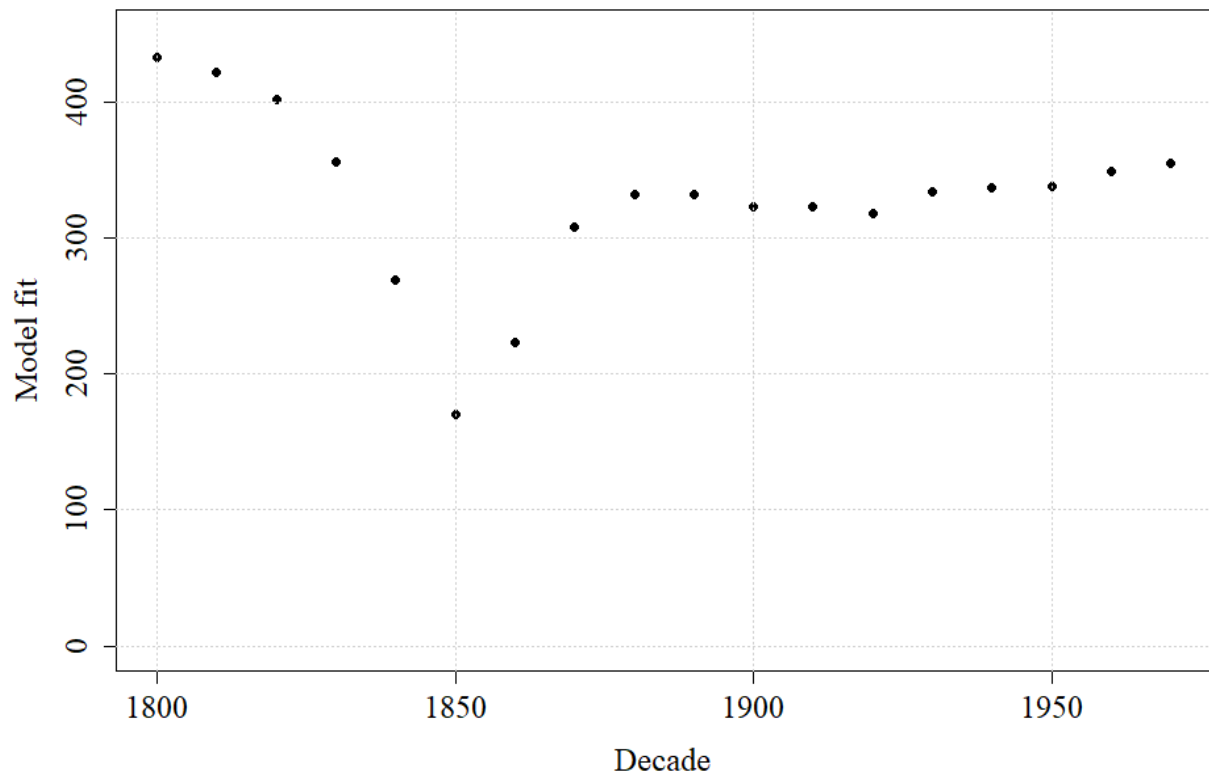


Figure S2. The least squares piecewise regression analysis. From the point of view of minimising the squared error between the correlation line and data (Figure 2C), the middle of the 19th century was identified as the period from where the number of species described per author began to decrease. Prior to that period, there is not enough evidence to identify a trend.

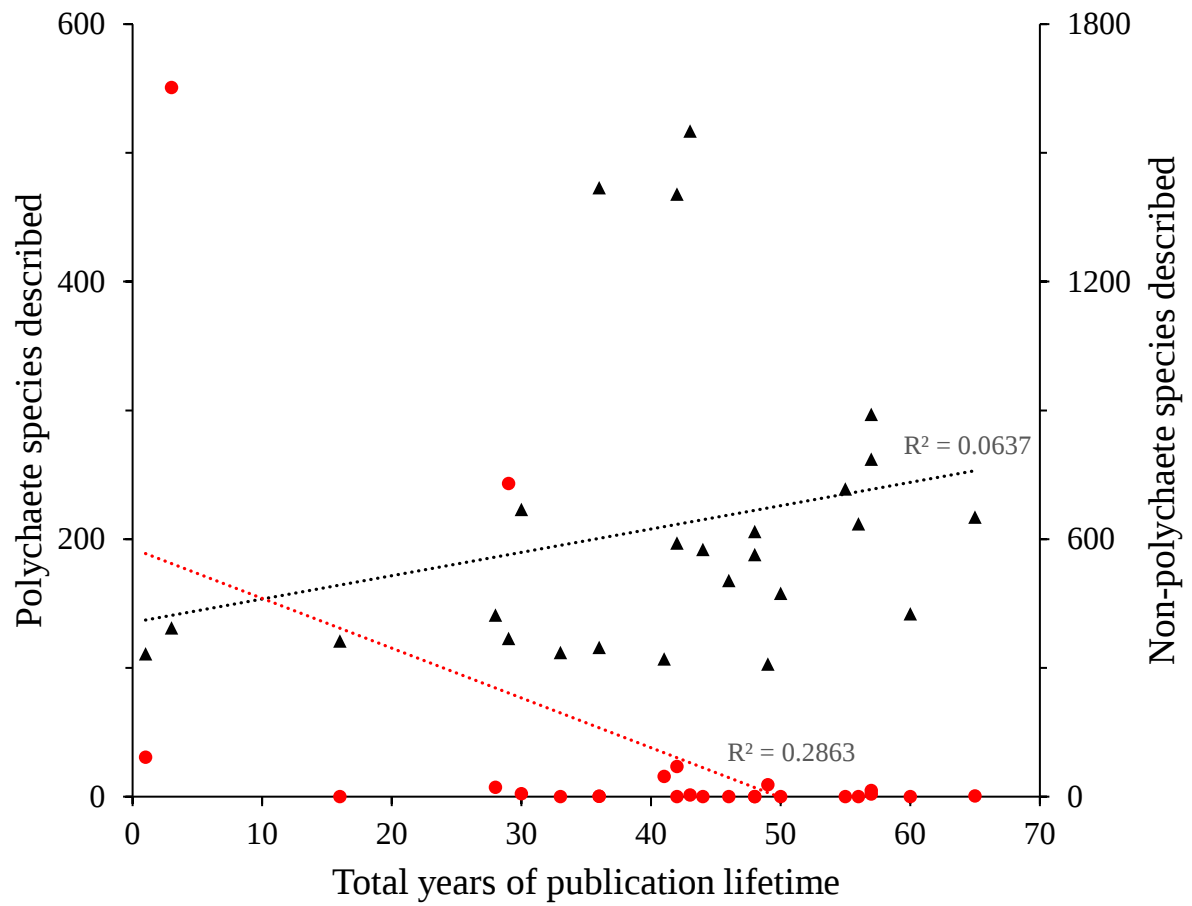


Figure S3. The number of polychaete (black triangles and line) and non-polychaete (red dots and line) species described by the 25 most prolific first authors during their publication lifetime.

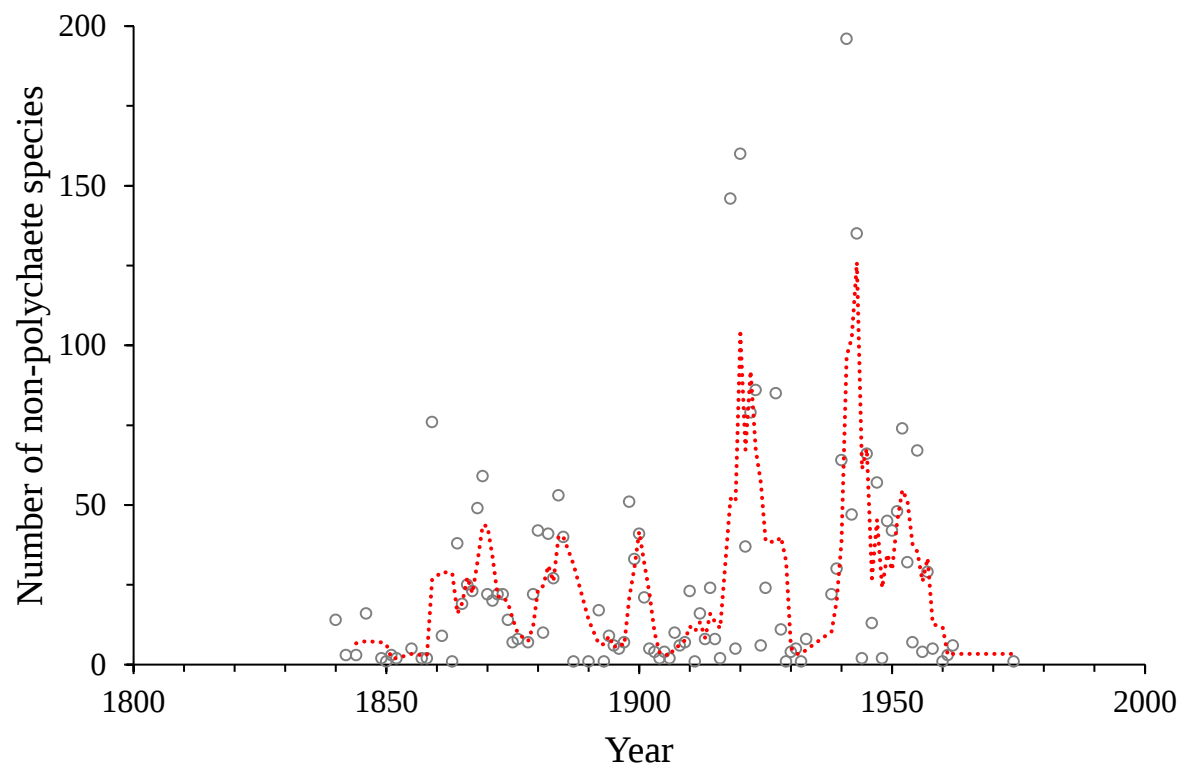


Figure S4. The number of non-polychaete species described by the 14 most prolific polychaete first authors over time. The red line is a three-year moving average.