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Salvidio S. (2025)**.** Trends and main characteristics of impacted herpetological journals. Acta Herpetol. **21**. doi: 10.36253/a_h-18137

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Submitted on 2025, 2th July; revised on 2025, 4th August; accepted on 2025, 1th September

Abstract. Herpetological journals publish papers dealing with the study and conservation of amphibians and non-avian reptiles. Journals in this field are listed under the "Zoology" subject category of the Journal Citation Reports (JCR) and are assigned a two-year and a five-year impact factor (IF2 and IF5, respectively). These are among the most widely used indicators for bibliometric and academic evaluation. In this study, I present an overview of some general and bibliometric characteristics of the 18 herpetological journals listed in the 2025 JCR database. Specifically, I analysed the temporal trends of the IF2 over the 2013-2024 period. The analysis showed that most of these journals (78%) maintained a relatively constant IF2 during the study period, while four (22%) exhibited an increasing trend. I also tested if a relationship between the IF5 and the number of issues, the number of citable items, or the percentage of gold open access items per year was present. However, no significant relation was observed at least for these 2024 bibliometric indexes. Finally, journals published by scientific societies showed a significantly higher IF5 ($P < 0.03$), in comparison to other journals. Therefore, choosing these journals when submitting herpetological-focused manuscripts should be more considered.

Keywords. Amphibians, Herpetology, Journal Citation Report, Impact factor, Reptiles, Zoological journals

The word herpetology is derived from the ancient Greek verb *ἕρπειν* (pronunciation hérpein) that means "to creep" or "to crawl" (Schlesinger, 1911). Historically, the zoological discipline of Herpetology pools and studies two terrestrial clades of cold-blooded Tetrapoda: amphibians and (non-avian) reptiles (Shine, 2014). These two animal taxa generally share a relatively small body size, low rates of energy consumption, and are often sampled in the field by overlapping or similar methods (e.g., Dodd, 2010, 2016). Therefore, the exclusion of birds (avian reptiles) makes of Herpetology an artificial category that, however, it is still considered useful from both an ecological and a practical point of view (Shine, 2014). Jointly, amphibians and reptiles are called herptiles or herps, while the whole amphibian and reptile community living within an ecosystem or a geographic defined area is named herpetofauna. For these reasons, academic societies, conferences and scientific journals dedicated to amphibians and reptiles are called “herpetological”.

When speaking about scientific journals several electronic databases and different bibliometric indexes describe and rank the scientific interest or status of academic journals for librarians, readers and authors (e.g., Pajic, 2015; Lazarides et al., 2023). The most influential indicators are usually those calculated upon citation rates based on international bibliographic databases. Currently, among the many proposed bibliometric indicators, the most popular is probably the two-year journal Impact Factor (IF2), published since 1975 for journals listed in the Journal Citation Reports (JCR), now edited by Clarivate (Garfield, 2006). This indicator is obtained yearly for each journal as the total number of citations enumerated in the considered year divided by the total number of citable items published in that journal during the previous two years (Hubbard and McVeigh, 2011).

In this note, I retrieved several characteristics of impacted herpetological journals listed in the JCR database. I also analysed the IF2 level of variability and its recent

temporal trend during the 12-year period 2013-2024. In addition, I evaluated if the journals' IF5 was correlated to specific features, such as the number of issues published per year and the total number of citable items. I also evaluated if bibliometric differences were characterising journal published or edited by scientific societies and those owned by private companies. The scope of this note was not to evaluate editorial policies, accountability or transparency as these aspects were already examined by Marshall and Strine (2021), or to endorse a specific ranking for herpetological journals, but to give a general overview about impacted herpetological journals to better understand their status and temporal trends.

I retrieved all the herpetological journals listed in the 2025 JCR subject section Zoology. From this database, I collected for each journal the first year in which the journal was listed in the JCR, the number of issues per year, the total number of citable items, the five-year impact factor (IF5), the percentage of gold open access (GOA) items published per year (i.e., published articles that are freely and permanently available online without any cost for readers), and the IF2 scores over the period 2013-2024. Moreover, I retrieved the journal publisher (scientific society or private company) and its nationality. From the journals' official websites, I also obtained information about the journal aims and scope and the submission procedure (i.e., through an online portal or by emailing directly the editors). The presence of temporal trends in the 12-year IF2 was evaluated by means of the Mann-Kendall non-parametric test (Zhang, 2021). I analysed if the number of issues per year, the number of citable items per year and the percentage of golden open access items (% GOA) were correlated to the journal five-year impact factor (IF5) values by means of Spearmans' rank correlation coefficient. A generalised linear model with binomial distribution (i.e. trend present or absent) and logit link function was used to assess if the year of first listing on JCR site was related to the presence of a positive IF2

trend. Differences between journal published or owned by scientific societies or private companies were assessed by Mann-Whitney non-parametric test (M-W). Statistical analyses were performed using PAST software 5.02 (Hammer et al., 2001) and statistical significance was set at $\alpha = 0.05$.

In the 2024 JCR database 18 journals dedicated to the study of amphibians and/or reptiles were listed in the subject category "Zoology", which contains overall 183 journals, (Table 1; Supplementary Material Table S1). Among these 18 journals, 13 included in their titles a word derived from *ἕρπειν* such as*:* herpetology, herpetozoa, herpetological and *herpetologica* (in Latin). Two journals were named after specific genera of amphibians, two explicitly referenced amphibians and reptiles, while one was exclusively dedicated to chelonians and therefore, dedicated only to turtles, terrapins, and tortoises. Seven journals were published in the United States, two each in Brazil and England, and one each in Austria, Germany, Italy, Japan, the Netherlands, the People's Republic of China, and Russia (Table 1).

The JCR database listed for the first time three herpetological journals in 1997, and the most recent addition occurred in 2021, following a title change (Supplementary Material Table S1). The aims and scope of 16 out of the 18 journals were globally inclusive and accepted manuscripts dedicated to all groups of herptiles from all regions of the world. In contrast, one journal focused exclusively on herptiles from the African region, while another was dedicated exclusively to chelonians (Supplementary Material Table S1). Submission procedures were diverse: 14 journals are using an online portal, while the remaining four are requiring submissions by direct emailing the appropriate editors (Table 1). The number of issues published per year ranged from 1 to 4, with half of the journals producing four annual issues.

There were no significant correlations between the IF5, and the number of issues per year, the number of citable items per year and the % GOA items (Spearman's rank correlation: $\rho = 0.325$, $P = 0.188$, $\rho = 0.061$, $P = 0.811$ and $\rho = -0.181$, $P = 0.472$, respectively).

Four journals showed a significant positive trend of their IF2, while the IF2 of 13 journals remained constant over the study period (Table 1). Although the sample size was relatively small, there was some evidence that a significantly increasing IF2 trend was related to the year in which the journal was first listed on JCR. In fact, all increasing trends were observed only for journals listed after 2010 (Table 1; Supplementary Material figure S1). Society-owned journals possessed a slight but significant higher IF5 in comparison to private-owned (1,3 versus 0.9, respectively; M-W: $U = 15$, $z = 2.112$, $P = 0.029$), but there were no differences concerning the number of issues per year (M-W: $U = 28$, $z = 0.982$, $P = 0.328$).

From this analysis it emerges that herpetological journals listed in the 2024 JCR are showing highly heterogeneous and variable scenarios. For example, there are journals that do not use an online platform for the submission of manuscripts, and the GOA proportion of articles showed a huge variation, ranging from 0 to 100% (Table 1).

Recently the real value of the journal impact factor as a "quality" indicator has been questioned, especially when zoological taxonomy journals are concerned (e.g., Pinto et al., 2021). This is the reason why I focused on general features and temporal trends, rather than on absolute values and relative ranking within the JCR Zoology subject list.

One of the main findings of this study concerns the analysis of the IF2 temporal trend of herpetological journals listed in the JCR. In fact, most of these journals showed constant impact factor values over the 12-year period, while only four journals possessed significantly increasing values. In fact, these journals were among the most recently listed

on the JCR portal, suggesting that their starting IF2 values were relatively low and that they are still increasing and have not reached the asymptotic values for their impact factor indexes. Finally, the absence of correlation between the number of issues, the total number of citable items and the percentage of gold open access items per year with the journal IF5 seems to suggest that, at least in the subcategory of Herpetology, journals are cited more on the specific merit and quality of papers rather than on a mere quantitative basis. The strategy of publishing more issues or more papers per year to increase visibility and bibliometric indexes does not seem successful, at least for the herpetological journals analysed. Finally, the outcome that society-published herpetological journals were showing a higher IF5 in comparison to private-owned journals appears surprising. Usually, society-published journals provide rigorous peer review by experts, and possess ethical, and transparent standards which enhance the credibility of their papers. For this reason, these society journals should be more considered when selecting for a publication venue for herpetological-focused manuscripts, in addition to other economic, academic and ethical considerations (e.g., Chytrý et al., 2023; Dolan et al., 2023).

ACKNOWLEDGMENTS

Thanks to Clément Duret and an anonymous reviewer for their constructive comments that improved the manuscript. The Author declares no conflict of interest.

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196 **Table 1**. Main bibliometric features of Herpetological Journal listed in the Journal Citation Report (ICR) 2024, obtained in June 2025. %

197 GOA = golden access articles; IF5 = five-years impact factor; IF2 trend calculated by means of Mann-Whitney rank statistical test; *

198 indicates a significant trend < 0.05.

Journal	Scientific Society	Nationality of Publisher	First JCR	IF5	Citable Items	% GOA	Issues per year	IF2 trend P
Acta Herpetologica	Societas Herpetologica Italica	Italy	2010	0.9	50	100	2	0.137
African Journal of Herpetology	Herpetological Association of Africa	England	2007	0.9	44	27	2	0.266
Amphibia-Reptilia	Societas Europaea Herpetologica	Netherlands	2000	1.6	128	24	4	0.299
Amphibian and Reptile Conservation	-	USA	2016	1.0	36	0	3	0.038*
Asian Herpetological Research	-	PR China	2011	1.2	76	7	4	0.019*
Chelonian Conservation and Biology	-	USA	2007	1.0	86	1	2	0.090
Current Herpetology	-	Japan	2017	0.7	60	15	2	0.054
Herpetologica	Herpetological League	USA	1997	1.8	86	0	4	0.158
Herpetological Conservation and Biology	-	USA	2010	0.9	156	0	3	0.721
Herpetological Journal	British Herpetological Society	England	1997	1.1	64	16	4	0.725
Herpetological Monographs	Herpetological League	USA	2001	2.1	10	0	1	1.000
Herpetozoa	Österreichische Gesellschaft für Herpetologie	Austria	2010	1.1	113	98	4	0.830
Ichthyology and Herpetology (from 2021)	American Society of Ichthyologists and Herpetologists	USA	2021	1.7	144	15	4	NA
Journal of Herpetology	Society for the Study of Amphibians and Reptiles	USA	1997	0.9	136	1	4	0.828
Phyllomedusa	-	Brazil	2015	0.9	63	98	2	0.008*
Russian Journal of Herpetology	-	Russia	2015	0.8	113	0	4	0.002*

Salamandra	Deutsche Gesellschaft für Herpetologie und Terrarienkunde	Germany	2012	1.6	64	1	4	0.351
South American Journal of Herpetology	Brazilian Society of Herpetology	Brazil	2015	1.1	66	0	3	0.431

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