



Women and Science: a portrait of herpetology in the state of Piauí

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Received: March 16, 2018 – Accepted: April 19, 2018 – Distributed: November 30, 2019
(With 1 figure)

Recently a Brazilian researcher has received great attention in national and international media by prize Rising Talents from L’Oreal’s For Women in Science program 2016, which has partnered with Unesco and the Brazilian Academy of Sciences, and awards women scientists who have contributed significantly to the advancement of Science. However, locally, what does this award represent? Does it, in fact, demonstrate a greater participation of women in science? How is the participation of women scientists in Piauí? What is the representativeness of women in the publications of herpetology in Piauí?

With the objective of make a punctual portrait of this representativeness, here, we analyzed, in a very preliminary way, the representativeness of women scientists in the publications on herpetology in the state of Piauí. For this, we analyzed publications (national and international) about all the aspects of herpetology (e.g., community ecology, new species records, species lists and description of new species) carried out in the state of Piauí between 2001 and 2017, through extensive searches on the websites Web of Science (2018), Google Scholar (2018) and specialized journals. We chose the state of Piauí as an empirical

universe because it is my state of origin (first author) and herpetology because it is our specialty. In addition, in this case, the state of Piauí represents an important model of study because the number of publications about the herpetology of the state has grown exponentially in the last ten years, through the publication of a considerable number of studies.

We found that there is still a very great inequality in the representation of women in science in the state of Piauí (specifically in herpetology). Although there has been a greater participation of women in the publications on the herpetology in the state of Piauí in recent years, its representativeness is much lower in relation to the number of authors men (Figure 1). For example, in the years 2001, 2005 and 2006, no woman was author or co-author of the works published in those years. In addition, during the 17 years analyzed, only in 2007 the number of women in the publications was higher than that of men (Figure 1).

To date, were published 49 articles on herpetology in the state of Piauí, in 21 national and international circulation journals (Table 1). Of these, 92% (n = 45) of the articles were published by men, being that in 71% (n = 35) of them

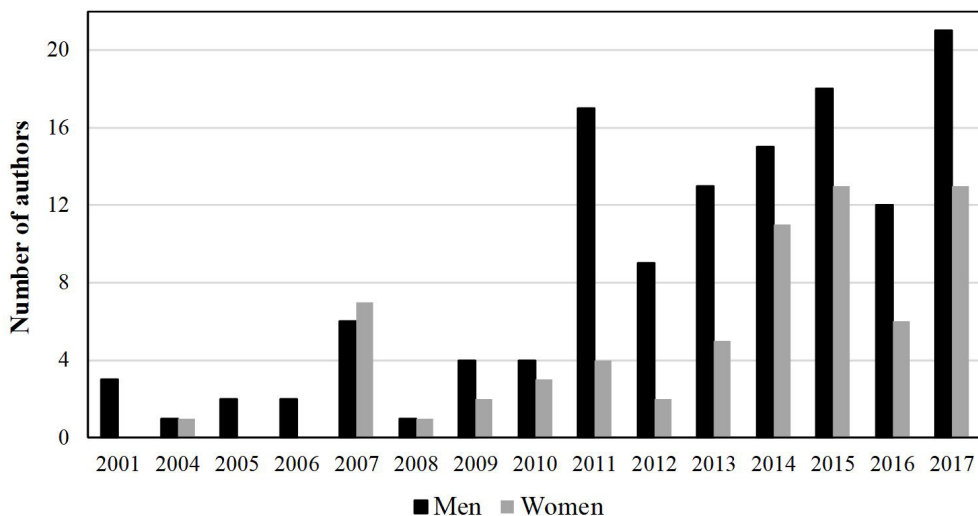


Figure 1. Distribution of the number of men and women authors in the 49 articles analyzed on herpetology in the state of Piauí between the years 2001 and 2017. There was no publication in the years 2002 and 2003.

Table 1. Articles (ART) on herpetology in the state of Piauí, between 2001 and 2017.

ART	Journal	N_A	N_M	N_W
ART1*	Papéis Avulsos de Zoologia	3	3	0
ART2	Publicações Avulsas Ciências Ambientais	2	1	1
ART3*	Papéis Avulsos de Zoologia	2	2	0
ART4*	South American Journal of Herpetology	2	2	0
ART5	Check List	5	3	2
ART6	Herpetological Review	4	1	3
ART7	Herpetological Review	3	1	2
ART8	Check List	2	1	1
ART9	Herpetological Review	3	2	1
ART10	Herpetological Review	3	2	1
ART11**	South American Journal of Herpetology	2	0	2
ART12	Herpetological Review	5	4	1
ART13	Check List	3	2	1
ART14*	Zootaxa	4	4	0
ART15	Check List	3	2	1
ART16*	Check List	4	4	0
ART17*	Herpetology Notes	5	5	0
ART18**	Zoologia	2	0	2
ART19	Check List	3	2	1
ART20*	Herpetology Notes	2	2	0
ART21	Check List	3	2	1
ART22*	Boletín de la Asociación Herpetológica Española	3	3	0
ART23*	Papéis Avulsos de Zoologia	4	4	0
ART24*	Biota Neotropica	3	3	0
ART25*	Zootaxa	3	3	0
ART26**	Zootaxa	2	0	2
ART27	ZooKeys	6	3	3
ART28	Cuadernos de Herpetología	2	1	1
ART29	Boletim do Museu Paraense Emílio Goeldi	3	2	1
ART30	Check List	11	8	3
ART31	International Journal of Ecology and Environmental Sciences	5	2	3
ART32	Herpetological Review	5	2	3
ART33	Gaia Scientia	3	2	1
ART34	Gaia Scientia	4	3	1
ART35	International Journal of Ecology and Environmental Sciences	5	2	3
ART36	Journal of Herpetology	5	4	1
ART37	Zootaxa	6	3	3
ART38	Boletim do Museu de Biologia <i>Mello Leitão</i>	3	2	1
ART39	Herpetological Review	5	2	3
ART40*	Biota Neotropica	5	5	0
ART41	International Journal of Ecology and Environmental Sciences	6	3	3
ART42	Revista Nordestina de Zoologia	4	2	2
ART43	Revista Nordestina de Zoologia	3	2	1
ART44	Tropical Zoology	6	3	3
ART45	Papéis Avulsos de Zoologia	3	2	1
ART46*	Brazilian Journal of Biology	4	4	0
ART47	Revista Nordestina de Zoologia	4	3	1
ART48	Austral Ecology	10	7	3
ART49	Revista Nordestina de Zoologia	3	2	1

N_A = numbers of authors; N_M = numbers of authors men; N_W = numbers of authors women; *Article composed exclusively by men; **Article composed exclusively by women.

a man was the principal author. In 71% (n = 35) of articles was composed by women, however, in only 30% (n = 15) of all published articles the women were the first authors. These 15 articles were written by only seven women, one of which published 5 of them. Thus, to date, all research done with the herpetology in the state of Piauí has been concentrated in seven women.

Although there is no difference in the professional quality of these authors (e.g., most have Ph.D.), the number of men and women who composed the articles was quite uneven, in number and composition. In the 49 articles analyzed, the number of times a man's name (n = 127) appeared as the author was significantly greater ($p < 0.001$) than the number of times a woman's name (n = 64) appeared as the author or co-author. Furthermore, about 27% of the articles (n = 13) were composed exclusively of men, whereas only three articles had exclusively women as authors and coauthors (Table 1).

This inequality certainly does not result from a difference in the professional capacity of women, but rather of a clear inequality in the labor market insertion, hiring teachers, lower wages, fewer funded and approved projects, and inequality each professional transition stage (Carnaval, 2016). Currently, the state of Piauí does not have any Postgraduate Program (masters and PhD level) in the area of Zoology or Ecology (Plataforma Sucupira, 2018). This should be an important factor to consider. Although this work portrays a punctual view of the local

reality and of a specific area, being necessary to know how does Piauí compare with other states, and other academic or professional areas, not only in herpetology, this study represents a formidable opportunity to collect, organize, present and discuss important data on academic representation and demonstrates the urgent need to create means and a greater incentive for the participation of women in scientific productivity in the state of Piauí.

Acknowledgements

R.A. Benício thanks Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP, Proc. 2015/11821-0) for financial support.

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