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Acarological publications in the last 150 years: historical trends and an assessment of current journals

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Next month, the 14th International Congress of Acarology will be held in Kyoto, Japan (14–18 July), and *Journal Citation Reports*® (JCR) will release the 2013 impact factor for journals. I am using this opportunity to provide an overview of acarological publications in the last 150 years and also an assessment of acarological journals.

Acarologists were traditionally affiliated and associated with entomologists and other zoologists, and their publications are scattered in many different journals and books. The first specialist journal, *Acarologia*, did not start until 1959 (Table 1), and the First International Congress of Acarology was held just half a century ago (Flechtmann 2011). Beginning in the 1950s, the number of papers on the Acari started to increase rapidly (Fig. 1), and reached a peak of over 13,000 during the 1980s. This level of very high output continued for the next 25 years, with over 12,000 papers per decade (while the data for 2010–2014 is for less than half a decade, based on current data, the total for this decade is predicted to be similar to the last two decades). The number of new taxa of Acari in the publications for each decade followed a similar trend, but peaked at just over 10,000 during the 1970s and 1980s. This was followed by a rapid decline (about 25% decrease) in the 1990s

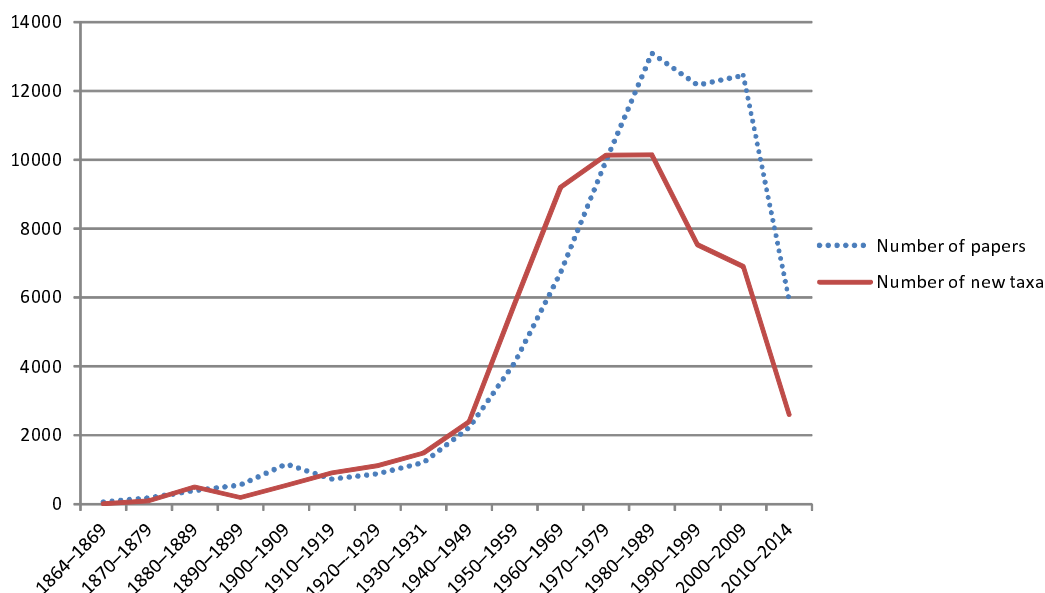


FIGURE 1. Numbers of papers and new taxa on the Acari published during the last 150 years. The number of papers was based on the search result of “Acari*” in the online edition of *Zoological Record*. The number of new taxa was based on metrics search of “Acari” at <http://www.organismnames.com/> (data as of 12 June 2014).

TABLE 1. Referred research journals in acarology*, with 2013 impact factor (estimated based on data in *Science Citation Index Expanded* or *SCIE*) and also the official 2012 impact factor based on *Journal Citation Reports® Science Edition (JCR)* (Thomson Reuters 2013).

Journal name and ISSN	Impact Factor	Year Started	Frequency per Year**	Publisher and Other Information
<i>Ticks and Tick-borne Diseases</i> ISSN 1877-959X	2.8 (2013) 2.3 (2012)	2010	Bimonthly	Elsevier; commercial; all issues available online in PDF for subscribers; some papers for open access
<i>Experimental and Applied Acarology</i> ISSN 0168-8162 (Print) ISSN 1572-9702 (Online)	1.7 (2013) 1.8 (2012)	1985	Monthly	Springer; commercial; all issues available online in PDF for subscribers; some papers for open access
<i>Systematic and Applied Acarology</i> ISSN 1362-1971	1.1 (2013)	1996	Quarterly	Systematic and Applied Acarology Society; not-for-profit; all issues available online in PDF to sustaining members; some papers for open access
<i>International Journal of Acarology</i> ISSN 0164-7954 (Print) ISSN 1945-3892 (Online)	0.6 (2013) 0.5 (2012)	1975	8 issues per year	Taylor & Francis; commercial; all issues available online in PDF for subscribers; some papers for open access
<i>Acarina, Russian Journal of Acarology</i> ISSN 0132-8077 (Print) ISSN 2221-5115 (online)	Currently not in <i>SCIE</i> & <i>JCR</i>	1993	Biannual	KMK Scientific Press on behalf of the Zoological Museum of Moscow State University; commercial; post-2005 issues available online in PDF for open access
<i>Acarines, Journal of the Egyptian Society of Acarology</i> ISSN 1687-4633	Currently not in <i>SCIE</i> & <i>JCR</i>	2007	Annual	Egyptian Society of Acarology; not-for-profit; issues not available online
<i>Acarologia</i> ISSN 0044-586X (Print) ISSN 2107-7207 (Online)	Currently not in <i>SCIE</i> & <i>JCR</i>	1959	Quarterly	Acarologia; non-for-profit; post-2009 issues available online in PDF for open access
<i>Journal of the Acarological Society of Japan</i> ISSN 1880-2273 (Print) ISSN 0918-1067 (Online)	Currently not in <i>SCIE</i> & <i>JCR</i>	1992	Biannual	Acarological Society of Japan; not-for-profit; all papers online in PDF for open access
<i>Persian Journal of Acarology</i> ISSN 2251-8169	Currently not in <i>SCIE</i> & <i>JCR</i>	2012	Quarterly	Acarological Society of Iran; not-for-profit; all papers online in PDF for open access

* This list includes only currently active referred research journals dedicated to the Acari. Many journals publish papers on the Acari but they are not dedicated to acarology; these are not listed here (e.g. *Journal of Entomological and Acarological Research*). Of the two non-referred journals in acarology, *Acari Bibliographia Acarologica* (a triannual journal published in Germany since 2001), and *Acarology Bulletin* (quarterly newsletter published in UK by Systematic and Applied Acarology Society since 1996), the latter is now discontinued. *Journal of Acarology* (a biannual referred journal started by the Acarological Society of India in 1977, initially *Indian Journal of Acarology*) is also no longer active. *Systematic & Applied Acarology Special Publications* (an open-access referred journal published in the UK by the Systematic and Applied Acarology Society since 1997) was merged with *Systematic and Applied Acarology* (see Zhang 2011).

** Frequency is for the current year (2014) as this has been increasing over time for some journals.

thereafter, the rate of decrease slowed considerably¹ (Fig. 1). As the total number of acarological publications is more or less stable during this period, this decline is a reflection of the decrease in taxonomic papers and increase of other papers on mites—acarology has become less descriptive and more diversified and non-taxonomic journals such as *Experimental and Applied Acarology* are becoming important.

The number of journals dedicated to the Acari has been on the rise, especially during the last few years (Table 1). Zhang (1996) listed seven acarological journals known at that time: *Acarologia*, *International Journal of Acarology*, *Experimental and Applied Acarology*, *Journal of Acarology*, *Journal of the Acarological Society of Japan*, *Acarina—Russian Journal of Acarology*, and *Systematic and Applied Acarology*. This list was repeated in Walter and Proctor (1999). While Baker (1999) also listed seven journals, she omitted the discontinued “*Journal of Acarology*” and added *Systematic & Applied Acarology Special Publications*, which was started in 1997. *Acarines*, the journal of the Egyptian Society of Acarology, was started in 2007. In this decade, two more journals were also established: *Ticks and Tick-borne Diseases* (2010) and *Persian Journal of Acarology* (2012).

Only four of the nine current peer-referred research journals in acarology are indexed in *Science Citation Index Expanded* (SCIE; Table 1). It should be noted that three of these four journals are published by major commercial publishers, and only *Systematic & Applied Acarology* (SAA) is a non-profit journal published by an acarological society; also SAA is the most recent journal covered in SCIE (Zhang 2011). Based on the citation data, Zhang (2014) estimated that the 2013 impact factor for SAA will be more than 1.1; here I also did the same for three other JCR-listed journals (Table 1): SAA is among the top three journals in acarology ranked by impact factor—clearly SAA is gaining a good reputation among acarologists in the world.

Acknowledgement

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1. Liu *et al.* (2013) analyzed data from 2007 to 2012 and showed that one journal (*Zootaxa*) contributed over a third of the total number of new species of the Acari described during this period; the rapid increase of acarological papers in *Zootaxa* in recent years might have contributed to the reduction of the rate of decline.