

Inception of Entomological Society of India and inaugural issue of the *Indian Journal of Entomology*

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The Entomological Society of India (ESI) established in 1938 completed 80 years of service to Indian and world science in 2018. The present article captures a few milestone events during its inception in 1938 and its 25th anniversary in 1964, further to a few in between. The Indian Journal of Entomology, the official organ of ESI, was launched in 1939 and has an intricately intertwined history along with ESI.

The year 2018 marked the 80th anniversary of the Entomological Society of India (ESI). Its official organ – the *Indian Journal of Entomology (IJE)* – will reach this milestone in 2019. Since several authors have comprehensively dealt with the history of entomology in India^{1–8}, here we shed light on the early days of ESI and the first issue of *IJE*, which have escaped attention in the above publications.

In the earlier decades of the 20th century, Indian entomologists usually met during the Indian Science Congress (ISC) sessions. Entomological papers were presented and discussed in the Zoology Section. From the silver jubilee session of ISC held in Calcutta in 1938, entomology became an independent section. But we need to remember that entomological meetings, particularly pertaining to agricultural entomology, were held at Pusa (25°51'N; 85°46'E) from 1915 at the initiative of Thomas Bainbridge Fletcher⁹, who succeeded Harold Maxwell-Lefroy¹⁰ as the Imperial Entomologist at the Imperial Agricultural Research Institute, which was later shifted to New Delhi and rebranded as the Indian Agricultural Research Institute¹¹ (note 1). The second meeting in this series, which we would readily and thankfully refer as the 'Fletcher meetings', was held in 1917; the third, fourth, and the last in 1919, 1921, 1923 respectively.

The Entomological Society of India

Inception, 1938

Fletcher¹² first made the call for a society for Indian entomologists. He did this during the Third Entomological Meeting held at Pusa during 3–15 February 1919. He spoke on this theme stimulated by a note he had read in the Report of the Indian Industrial Commission submitted

by Thomas Henry Holland¹³. While speaking on this point, Fletcher¹² refers to the Institution of Civil Engineers in India that was in existence from 1837 and other professional bodies in Britain, such as the Chemical Society (from 1841) and the British Association for the Advancement of Science (from 1831; later 'the British Science Association'). Fletcher¹² indicates that there will be many advantages because of a society covering the whole of India, as membership thereof would confer great prestige. Further to reading and discussing professional papers, such a society would inevitably interest itself in problems with which the State has to deal, and in which it would be advantageous to receive the considered opinion of a representative body. He reinforces that the Government would support the idea of a professional entomological society and would perhaps assist to some extent. At the same time, Fletcher remarks¹² (p. 3):

'I do not know, however, to what extent the formation of an Entomological Society would meet the wishes and requirements of entomologists in India, nor, I must confess, do I quite see what would be the functions of such a Society. If my scheme for centralization of entomological work in India eventuates, such a Central Institute and Service would fulfil all the ends of a Society as regards such items as publications, collections, references and assistance generally to other workers. Even as it is, our periodical meetings (i.e., Pusa Entomological Meetings) provide ample opportunity for discussion of any problems and it is difficult to see how more frequent or better attended meetings could be arranged in such a vast country as India, nor is there any lack at present of facilities for publication in this country.'

This suggestion, mooted by Fletcher, hibernated for 18 years. It re-emerged at the 24th ISC Session held at Hyderabad in 1937. Here a society for Indian entomologists was born. An ad hoc committee consisting of Mohammed Afzal Husain (note 2), Hem Singh Pruthi, Tarakad Vythianathan Ramakrishna, Yelseti Ramachandra Rao, Narayan Chandra Chatterjee, Dev Raj Mehta, and Durga Das Mukerji (note 3) was constituted to develop rules and regulations for the proposed society. On 7 January 1938, at the ISC Session in Calcutta, Ramakrishna moved a resolution that the society for Indian entomologists be named the Entomological Society of India, and the draft rules developed by the ad hoc committee be accepted. This resolution was accepted unanimously³. ESI was formally launched by Afzal Husain, an eminent locust entomologist of India and the Principal of the Punjab Agricultural College at Lyallpur (now Faisalabad, Pakistan) (1933–38)^{14,15}.

Following excerpts from Afzal Husain's² address at the ISC Session at Hyderabad in 1938, are captured here as reminders (note 4). In the context of the just-inaugurated ESI, Afzal Husain says (p. 246):

'It is most necessary for the future development of our science that a powerful independent body of scientific opinion be created to foster the growth of entomology in our country. An entomological society with branches all over the country is greatly needed.'

In the context of a journal (p. 244):

'For growth of entomology a periodical devoted entirely to the publication of research working this science is essential. Most of the papers on entomology, therefore, find their way

HISTORICAL NOTES

into periodicals dealing with general agriculture, forestry, medicine and veterinary, or what is still distressing, into the proceedings of various societies and academies, and the publication of various universities, intermixed with subjects which are of the remotest interest to an entomologist.’

At the time of inauguration in 1938, the ESI enrolled 42 full members and one associate member. The 1938 ad hoc committee determined the following as the Society’s objects:

- To advance the cause of entomology in India.
- To encourage and promote entomological study and research.
- To demonstrate knowledge of entomology and its application.
- To facilitate a close association and interactions among members, and other scientific workers in India and abroad.

Yelseti Ramachandra Rao (1885–1972), a colleague of Ramakrishna in Madras Agricultural Service and stationed at the Agricultural College and Research Institute, Coimbatore, played a key role in the establishment of ESI and running of *IJE*. Most of us would know of his path-breaking contributions to locust entomology in India (note 5).

Provision was made to facilitate establishment of branches of ESI in different towns: the New Delhi branch was established on 18 May 1938, the Sind (Karachi) branch on 16 September 1938, the Punjab (Lyallpur) branch on 9 November 1938, and the Coimbatore branch on 3 May 1939. These branches convened regular meetings, where entomological papers were read and discussed. Until 1968, the annual general-body meetings of the ESI were held during ISC sessions.

Milestones: the twenty-fifth anniversary, 1964

To celebrate the 25th anniversary, a conference of entomological and plant protection workers was organized in New Delhi during 22–28 April 1964. This was promoted as an occasion for Indian entomologists from various disciplines, such as medical and veterinary entomology, to get together, review progress and

identify measures for future work. The event included special addresses by A. D. Pandit (Indian Civil Service, Vice-President of the Indian Council of Agricultural Research, New Delhi)¹⁶, Shyam-sundarlal Pradhan (President, ESI, New Delhi; note 6), and Edward Knipping (USDA–ARS, Washington, DC, USA) (note 7). The *American Entomological Society of America* (presently, the *Bulletin of the Entomological Society of America*) refers to this celebration (1964, 10, 91; <https://doi.org/10.1093/besa/10.2.91b>). Carroll N. Smith, President of the Entomological Society of America (ESA) deputed Halbert Marion Harris – then stationed in New Delhi as a Ford-Foundation Consultant at the Plant Protection India Field Office – to represent ESA at ESI’s silver jubilee¹⁷ (note 8). During this event, ESI published *Entomology in India* (1964) that included articles referring to progress made in entomology in the country. A supplement to this volume was published in 1965, including a few other articles on Indian entomological research plus the minutes of the proceedings of the ESI members meeting held during the 25th anniversary. Between 20 and 24 January 1969, an international symposium ‘Integrated Control’ was convened in New Delhi under the aegis of ESI. The membership of ESI was 1200 in 1968. The Society attracted members not only from India, but there were a few foreign members as well.

A printed article entitled ‘A short history of the Entomological Society of India’ was invaluable to us. Unfortunately, no bibliographic details of this article were traceable, although from the dates mentioned in it, we could infer that this article was published either in or a little after 1968 (note 9). This article lists the names of presidents of ESI from 1939 to 1968 (Table 1). It also mentions the taking over of the *Bulletin of Entomology (BoE)* by ESI in 1966–1967, which was published from Madras (now Chennai) from 1960. A note in the journal indicates that ESI will continue publishing *BoE* to feature articles on insect taxonomy and morphology. Good to note that *BoE* is being continued to date by ESI, along with another journal, viz. *Memoirs of ESI*. Since no further details on the background of *BoE* are provided in this document, we supplement some details here. *BoE* was started in Madras in 1960 by Taracad Narayanan Ananthkrishnan, then attached to the Department of Zoo-

logy, Loyola College, Madras, i.e. before he established the Entomology Research Unit, which later grew into the Entomology Research Institute. Mahadevan Anantaraman (Department of Parasitology, The Madras Veterinary College) was one of the two associate editors, who probably handled papers on arthropods of veterinary importance. The other associate editor was Yelseti Ramachandra Rao. Ananthkrishnan edited this journal until 1966 and subsumed it with ESI for reasons unknown.

When ESI was established in 1938, one task it was charged with was to start the *Indian Journal of Entomology*. An editorial board comprising H. S. Pruthi (New Delhi), T. V. Ramakrishna (Coimbatore), N. C. Chatterjee (Dehra Dun), D. R. Mehta (Lahore), Khan A. Rahman (Lyallpur) and Krishna Behari Lal (New Delhi) was constituted in 1938 (ref. 18). Pruthi was the chief editor. The first issue of *IJE* rolled out of press in June 1939. Here we include a few key features from the inaugural issue (note 10).

Table 1. Presidents of the Entomological Society of India

Year	President
1939	M. Afzal Husain
1940	H. S. Pruthi
1941	T. V. Ramakrishna
1942	K. A. Rahman
1943	N. C. Chatterjee
1944	J. C. M. Gardner
1945	M. C. Cherian
1946	T. Ahmed
1947	K. B. Lal
1948–1950	H. S. Pruthi
1951–1958	E. S. Narayanan
1959–1960	S. Pradhan
1961–1962	E. S. Narayanan
1963–1968	S. Pradhan
1969–1970	B. L. Wattal
1971–1972	N. C. Pant
1973–1974	S. K. Prasad
1975	R. C. Patel
1976	C. P. S. Yadava
1977–1978	T. P. S. Teotia
1979–1982	K. S. Kushwaha
1983–1985	K. R. Thakare
1986–2003	K. S. Kushwaha
2004–date	S. N. Puri

Up to 1968, details were extracted from ‘A short history of the Entomological Society of India’ (Author name, date of publication (1969?), and other bibliographic details not traceable; note 9). From 1968 onwards the list has been reconstructed using details from the *Indian Journal of Entomology* issues.

Milestones: All-India Entomology Conference, 1958 and two others in 1944 and 1950

Halbert Harris¹⁷, while reporting to ESA, after participating in the silver jubilee event in 1964, refers to an all-India entomological conference held in 1958. He indicates the 1958 conference as the ‘second’ event. According to Harris¹⁷, daily sessions of the 1958 conference were pitched on the theme ‘advances’ in one or another aspect of entomology and plant protection in India. Each field, within the broad gamut of entomology, opened with invited reviews, followed by reports on original works presented by people in attendance, which was followed by open discussions. Mimeographed copies of most all papers were distributed at or before time of presentation.

The 1958 event was not the second conference in the chronicles of entomology in India. It was the third (*Indian Journal of Entomology*, 1950, 12, 115). On 27 March 1950, a conference was held at Patiala, convened by the Indian Council of Agricultural Research, New Delhi, coinciding with the biennial meeting of the Crops and Soils Wing of the Board of Agriculture and Animal Husbandry in India. It was chaired by Pruthi, the Plant Protection Adviser, Government of India. Twenty-two officers connected with entomological work in India representing various State and Central Governments and from the institutions committed to sugarcane, lac, forest, rice and malaria management attended this conference. M. S. Mani and the Deputy Director of Sericulture, West Bengal also participated. A similar meeting of entomologists seems to have been held in 1944 (location unknown), mentioned by Pruthi in his presidential address of the 1950 conference.

The Indian Journal of Entomology – inaugural issue

Preliminary pages

The following text extracted from the opening feature ‘Ourselves’ (pp. 1–3), possibly by Pruthi, clarifies the intent of and context for the new journal:

‘A journal devoted to all branches of Entomology is a new venture of India. ... contributions relating to

Indian insects have been appearing, in addition to some foreign journals, in the reports and departmental publications of Government, the proceedings of scientific and departmental publications of Government. ... Many of the entomological papers, therefore, are often out of place in the journals in which they are published, and hence of little interest to the majority of readers, while those actually interested in the subject have to wade through numerous titles of articles before they come across any of direct interest for them.’

This article further clarifies that *IJE* would be a living record of the growth of the science of entomology in the country. *IJE* will strive to pursue insect studies for elucidating problems of purely scientific interest, such as those in relation to morphology, ecology, genetics, behaviour and evolution, further to the research done on the control of insects, recognized as pests (Figure 1). Due to extensive variations in India’s climate, soil and geographical conditions and highly varied vegetation types, the insect fauna offers exceptional opportunities for the study of general problems pertaining to Indian insects. This article clarifies that greater emphasis on the fundamental aspects of Indian insects was direly necessary in India, because considerable emphasis was already being placed on managing populations of nuisance insects from the perspectives of agriculture, forestry, medicine and veterinary science. In such a context, this article says:

‘By publishing papers, especially on the latter subjects (viz. biology, ecology, and taxonomy of Indian insects), this Journal (viz. *IJE*) hopes to restore, ..., the balance between the outputs of results in applied entomology and those in the domain of pure scientific research.’

IJE was meant to be a medium through which entomologists in the Indian sub-continent could connect with each other professionally. It was also meant to promote amateur interest in insects, by providing literature and advice as appropriate.

Congratulatory messages from entomological leaders of that time, such as Guy Marshall (Imperial Institute of

Entomology, British Museum, London), Augustus Imms (Department of Entomology, University of Cambridge, Cambridge) (note 11), Geoffrey Hale-Carpenter (Oxford University Museum, Oxford), Leland Howard (U. S. Department of Agriculture, Washington, D.C.), Filippo Silvestri (Department of Agriculture, Naples–Portici), Lee Strong (U. S. Department of Agriculture, Washington, D.C.), Arthur Gibson (Agriculture Canada, Ottawa) and Hans Sachtleben (Deutsches Entomologisches Institut, Berlin–Dahlem) occur in pp. 3–6.

Edward Percy Stebbing (1872–1960), who served as the forest entomologist–zoologist in India in 1900–1910, offers a relatively lengthy message (pp. 6–8) captioned ‘The beginnings of the study of entomology in India’. Stebbing’s *Indian Forest Insects of Economic Importance: Coleoptera* (1914), further to other forestry books, including *The Forests of India* make us to remember him. Stebbing refers to the scantiness of entomological literature in India, which, at his time was largely confined to publications contributed by Everard Charles Cotes^{19,20} (1862–1944; mostly the First Assistant to the Superintendent of the Indian Museum in Calcutta; officiated for a while as the Deputy Superintendent

CONTENTS	
	PAGES
Descriptions of Some New Species of <i>Empoasca</i> Walsh (Eupterygidae, Jassoidea) from North India. By HIM SINGH PRUTHI	1-10
A New Indian Plume-moth (Alucitidae, Lepid.). By T. BAINBRIDGE FLETCHER	11-12
Studies on Indian Aphididae. Part I. Aphid Fauna of Delhi. By GHULAM UL-LAH	13-25
The Morphology of the Genitalia in the Aleurodidae (Homoptera) and their Mode of Working. By R. RAKSHPAL	27-43
Studies on <i>Platyedra gossypiella</i> Saunders in the Punjab. By M. APZAL HUSAIN and M. HAROON KHAN	45-57
On the Biology of <i>Evidarus lividus</i> (Ashm.), a Parasite of <i>Agromyza obtusa</i> Mall. By TASKHIR AHMAD	59-63
On the Biology of <i>Spilonota ocellana</i> Schiff, in Baluchistan. By A. M. MUSTAFA and NAZBER AHMED JANJUA	65-73
<i>Tetrastichus ayyari</i> Rohw., a pupal parasite of some Moth-borers in South India. By M. C. CHERIAN and C. K. SUBRAMANIAM	75-77
On the Biology of <i>Spathius vulnificus</i> Wilk., a possible effective parasite of <i>Pemphres affinis</i> in South India. By P. N. KRISHNA AYYAR and S. P. NARAYANASWAMI	79-86
On the Worker Brood-cells of the Bee <i>Apis indica</i> F. in the Punjab. By SARDAR SINGH and PRITAM LAL SHARMA	87-91
Short Notes and Exhibits	93-98
Recent Research	99-104
Progress of Entomological Research in India during 1939. By HIM SINGH PRUTHI	105-112
New Books & Monographs	113-114
News and Announcements	114-115
Proceedings of the Entomological Society of India	117-122
Advertisements	

Figure 1. Contents page from *Indian Journal Entomology (IJE)*, 1940, 2(1). Source: <https://www.biodiversitylibrary.org/item/128937#page/23/ode/1up>

HISTORICAL NOTES

of the Indian Museum) in the *Indian Museum Notes*. While reinforcing the usefulness of launching *IJE*, he pays tributes to the *Journal of Bombay Natural History Society* (Bombay) and the *Royal Asiatic Society of Bengal* (Calcutta), which published occasional articles on Indian insects.

Ramakrishna's lead article: 'Entomology in India – a retrospect'

Ramakrishna has written this article (pp. 9–16) after his retirement from the professorship of Agricultural Entomology at the Madras Agricultural College (now Tamil Nadu Agricultural University), Coimbatore²¹. He writes under two sections: 'Insect lore in ancient India' and 'Entomology in modern India'. He subdivides the second section into three time periods: 1779–1850, 1850–1900 and 1900 onwards. In the subsection '1900 onwards' he refers to the contributions made by Charles de Nicéville²², Harold Maxwell-Lefroy and Thomas Fletcher to Indian entomology.

Ramakrishna starts his narration from 1779, which makes sense. Western science-based entomological studies, first started in the Madras region (then not referred as Presidency). Johann Gerhard König (1725–1785) published a paper on the biology of termites of Tanjavur (10°47'N, 79°8'E) in *Beschäftigungen der Berlinischen Gesellschaft Naturforschender Freunde*, a German natural-history journal, in 1779 (note 12) (Figure 2)^{23,24}. In the section '1900 onwards', Ramakrishna says (p. 14):

'Provincial governments and some states started entomological work. Madras was the first among the provinces (i.e. Presidencies) in the direction as may be found in the work of Bainbrigge Fletcher, who was the first Madras Government Entomologist from 1909 up to 1911 and who published the book on *Some South Indian Insects* (1914).'

Ramakrishna clarifies that the first formal appointment of a State Entomologist in India was made in Mysore in 1907, but does not identify the person. It was Leslie Charles Coleman (1878–1954), who came from Ontario, Canada, to accept the position of Entomologist–Mycologist of Mysore Government Service and rose

in ranks as the Director of Agriculture, Government of Mysore in 1934. Coleman will be remembered for his scientific contributions to the management of *Xylocorychus quadripes* (Coleoptera: Cerambycidae), which devastated coffee plantations in Mysore state. The life and work of Leslie Coleman in India has been immortalized by Ignacio Bolívar (of Spain initially and of Mexico later) by naming the Deccan grasshopper as *Colemania sphenarioides* (Orthoptera: Pyrgomorphidae)²⁵. Kumar Ghorpadé's journal *Colemania* celebrates Coleman and his service to Indian entomology.

Ramakrishna adds that from the 1900s, entomological studies in India widened because of considerable work in agricultural, forest, medical and veterinary entomology, with papers appearing in the *Indian Forest Records*, *Journal of Indian Medical Research*, *Memoirs and Bulletins of the Imperial Department of Agriculture*. One key incentive to entomological studies, according to Ramakrishna, was the start of the Zoological Survey of India in 1916, which he implies as a good stimulus due to the pioneering efforts of Thomas Nelson Annandale (1876–1924) (ref. 26), Enrico Adelelmo Brunetti (1862–1927) (ref. 27) and Frederic Henry Gravely (1885–1965) (ref.

28), who contributed variously to the understanding and cataloguing of Indian insects. Ramakrishna lists many other natural historians and amateur entomologists in India, who published their papers in the *Annals and Magazine of Natural History* and *Transactions and Proceedings of the Entomological Societies*, further to many other European journals, which will be critical from the perspective of the history of Indian entomology. He concludes with a hope that his article would provide insights into the labours of early workers in entomology in India and would act as a stimulus to future generations of Indian entomologists.

Technical articles

A variety of articles focusing on the ecology of insects from different parts of India fill the first issue. An ecological study of *Earias vitella* (Lepidoptera: Noctuidae) and its parasitoids by T. Ahmad and G. Ullah, the influence of desert storms on the migration of *Locusta migratoria* (Orthoptera: Acrididae) by D. Bhatia, and phase transformation of *L. migratoria* by R. L. Gupta feature in this issue. A paper on the responses of *Trogoderma granarium* (referred as *T. khapra*, Coleoptera: Dermestidae) to light by K. A. Rahman and G. S. Sohi follows. Because of the general behaviour of light avoidance by *T. granarium*, Rahman and Sohi rationalize their study on the photosensitivity of the species. The custom-made light device to evaluate photosensitivity of *T. granarium* is impressive. In the context that only a few insects are adapted to tolerate and live in high temperatures, e.g. 40–50°C, a short paper by Pruthi referring to populations of *Helochares lentus* and *Coelostoma stultum* (both Coleoptera: Hydrophilidae) from a hot spring (45°C) near Manāli (Kulu Valley) offers an interesting reading. This is followed by a taxonomic paper by M. S. Mani pertaining to several species of Chalcidoidea and one Cynipoidea.

Other features

Brief sections entitled 'Short notes and exhibits', 'Recent research', 'New books and monographs' and 'News and announcements' fill the remainder of the first issue. Affairs pertaining to the ESI, such as the proceedings of the previous meetings, details and proceedings of

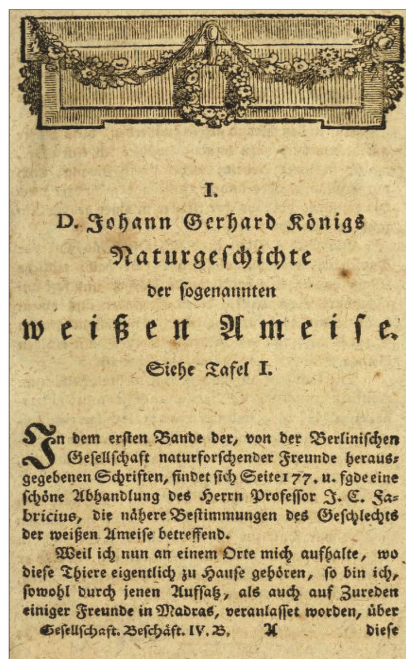


Figure 2. Cover page of König's paper: the first formally published entomological paper in India.

meetings organized by local chapters, and the list of registered members feature towards the end. The section 'Short notes and exhibits' is novel and offers fascinating insights. As a sample, we will refer to a brief report by Mani (p. 111), wherein he refers to 'autophotographs of some Indian butterflies'. Although Mani uses a new and unheard-of term, viz. 'autophotographs', they indeed refer to the previously known practice of creating photograms. These are 'captured shadows' attempted by the famous inventor William Henry Fox Talbot of Britain in mid-19th century²⁹. Many such natural-historical notes, none exceeding either a quarter or a half of printed page, are mind-capturing.

In conclusion

The present note sheds light on some of the lesser-known milestone events of the ESI and *IJE*, particularly because ESI completed 80 years of service to Indian science in 2018 and *IJE* will do so in 2019.

The role played by the academic and general staff of the Division of Entomology (DE), Indian Agricultural Research Institute (IARI) in managing the affairs of ESI and *IJE* over the years, calls for our sincerest appreciation. Successive managers of ESI and *IJE* from the time of Pruthi at DE, IARI have untiringly contributed time and energy to the life and success of both ESI and *IJE*. A volume cataloguing the references of published work and indices of subjects, authors and binomials in *IJE* between 1939 and 1984 is available³⁰.

Entomology was treated as a subdiscipline of zoology in the early decades of the 20th century in India. However, curiously, the Zoological Society of India was established only in 1948, a decade after the establishment of ESI. A notice in *Nature*³¹ says:

'The following have been elected members of the Executive Council of the Zoological Society of India: *President*, Dr. S. L. Hora; *Vice-President*, Prof. D. R. Bhattacharya; *Secretary*, Dr. M. L. Roonwal; *Editor*, Prof. K. N. Bahl; *Treasurer*, Dr. B. S. Chauhan; *Members*, Dr. K. Panikkar, Prof. M. A. Moghe, Dr. B. N. Chopra, Dr. Bhattacharya, Dr. G. D. Bhalerao, Dr. D. V. Bal, Dr. T. J.

Job. It is intended to bring out the first volume of the *Journal of the Zoological Society of India* this year' (note 13).

ESI, currently presided over by Subhash Narasinh Puri, is doing well with 1350 continuing members, including 434 life members. The ESI website (<http://www.entosocindia.org/>; accessed on 11 October 2018) lists details of its present Executive Committee and the Editorial Advisory Board. The Society organizes annual endowment lectures in honour of eminent Indian entomologists, such as T. V. Ramakrishna, S. Pradhan, K. M. Singh and T. N. Ananthkrishnan, and training workshops for younger entomologists of the country, further to cooperating with other independent efforts in convening entomological meetings. ESI has local chapters in Madurai (Tamil Nadu) and Umiam (Meghalaya). It has organized five regional workshops for farmers on the advances in small-scale farm storage and fumigation practices, thus empowering more than 2000 farmers all over India.

Our efforts to track the reasons for the choice of the walking-leaf insect (a species of *Phyllium*, Phasmatodea: Phyllidae) as the logo for ESI (Figure 3) led us

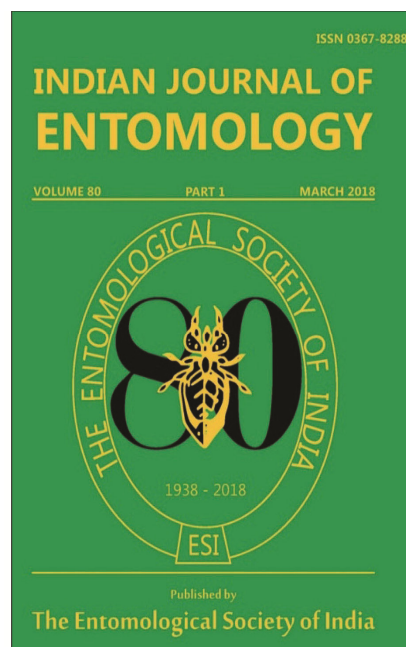


Figure 3. Cover page of the March 2018 issue of the *Indian Journal Entomology*, showing ESI's logo, *Phyllium* species (walking-leaf insect). (Source: <http://www.entosocindia.org/indian-journal-of-entomology.html>)

nowhere: highly possibly, either its curious morphology (note 14) or its endemism to the Indian subcontinent attracted the ESI office-bearers in 1938 to select the insect³².

Recent numbers of *IJE* impress as a regularly appearing, peer-reviewed quarterly, thanks to the passionate efforts of Vilayanor Venkataraman Ramamurthy of IARI. *IJE* appears both in print and as online editions (<http://www.entosocindia.org/indian-journal-of-entomology.html>). Growth of *IJE* as indicated by the numbers per year increasing from two to four (March, June, September and December) is obviously due to its popularity. Rise in the number of issues per year has been gradual: from vol. 14 (1952) the number increased from two to three a year, and subsequently to four. The issues are up-to-date. Early issues of *IJE*, i.e. up to the 1980s, largely fulfilled their originally intended role as the living record of growth of entomology in India, bringing to light much of the ecology, physiology, and evolution of Indian insects, meeting the objects determined in 1938. This intent, however, has taken a battering in the last three decades, with the focus largely shifting to how Indian insects – which are sweepingly labelled as pests – are being controlled through application of synthetic pesticides. No doubt, 'applied entomology' concerning itself with 'pestiferous insects' is important from an agricultural perspective. But the general development of the term 'insect' conveniently substituted by the term 'pest' is discomforting. Also, the rate at which insects are being seen as pests, especially in Indian entomology, it will be no surprise if the science of insects, elegantly referred as 'entomology' is soon replaced with the term 'pestology'.

Raghavendra Gadagkar in his presentation 'Entomological research in India: basic and applied research remain disconnected' (Science Communication Plenary, International Branch Virtual Symposium 2018, Entomological Society of America, <https://twitter.com/hashtagentscicom?src=hash>, 18 April 2018) has spoken candidly on the unpleasant divergence in interest among Indians studying insects: the 'entomologists', who study the taxonomy and control (management?) of insects and the 'insect scientists', who study the ecology, genetics and evolution of insects. He refers to the ideological conflict between the two artificially cleaved groups of insect

HISTORICAL NOTES

biologists in India. Gadagkar's comments need to be seriously reflected upon and considered by the office-bearers and members of ESI, and other insect biologists of India, so that in future we will sink our prejudices and personal differences, and forge an articulate intent of exploring insects from diverse perspectives. More importantly, we need to deal with them as beautiful and enchanting organisms, than rudely treating them as pests. The dire and immediate need today is cooperation and mutual regard between both groups of insect biologists – be they entomologists or insect scientists – and respect towards insects and their allies.

While commemorating the 80th anniversaries of ESI and *IJE*, we need to consciously recognize that insects are wonderful organisms that educate us – humans. They demonstrate amazing technology³³. Their creative behaviour involving novel technology is far too complex for human comprehension³⁴. Eusociality, the highest form of social behaviour is demonstrated by various insects through an inimitable division of labour. The most profound eusocial organisms on the earth are the Hymenoptera³⁵. We need to recall, with utmost modesty, that we learnt the earliest form of technology – agriculture – from those belonging to the Attini and Dacetina (Hymenoptera), which have been farming over several millennia. Will we – *Homo sapiens* – ever be modest enough to recognize the splendour of these wonderful six-legged creatures and see them as 'insects'?

Notes

1. This being a historical note, we have made every effort to provide the full names of people referred to here. Some have dodged our best efforts. We regret those omissions.
2. Ramakrishna spelt it as 'Tarakad'. Ananthakrishnan spelt it as 'Taracad'. Both terms refer to the same village in Palakkad. Because this term is a part of their names, we did not want to change the spellings as available in various records. Afzal Husain is indicated in the literature as 'Mian Afzal Husain', 'Mohammed Afzal Husain', 'Husain' and 'Hussain'. We have preferentially used 'Mohammed Afzal Husain' in this note, following Kasturirangan¹⁴.
3. Photographs of several pioneer entomologists of India – referred to in this note –

are available in David and Ramamurthy⁸.

4. Full proceedings of the 25th Session of Indian Science Congress 1938 are available at <https://drive.google.com/file/d/1W4PzrHhrkmFyDhg5Spz1XUSocYa-YzfKc/view>.
5. Yelseti Ramachandra Rao served as Assistant Government Entomologist, located at the Madras Agricultural College, Coimbatore, in the early decades of the 20th century. In 1946, he was the Deputy Director (Foreign Quarantines) at the Directorate of Plant Protection, New Delhi. During this tenure, he consolidated his long-term studies made on *Schistocerca gregaria* (Orthoptera: Acrididae) from the 1930s, with an intent to publish that file with support from the Indian Council of Agricultural Research (ICAR), New Delhi. This project, although initiated in 1951, materialized only in 1961. See *The Desert Locust in India*, Indian Council of Agricultural Research, New Delhi, 1961, p. 721 (<https://archive.org/details/LocustIn-India/page/n849>). Yelseti Ramachandra Rao should not be confused with another equally distinguished entomologist of India: Thammajirao Ramachandra Rao (popularly T. R. Rao; 1907–1984).
6. A biographical note on S. Pradhan is available in his book *Agricultural Entomology and Pest Control* (pp. iv–vi), published by ICAR in 1983, ten years after his death.
7. Knipling will be remembered for his trail-blazing sterile-insect technique to manage populations of the Calliphoridae (Diptera; blowflies, screwworms) of veterinary importance in the 1950s (ref. 36).
8. Halbert Harris was a Visiting Professor of Entomology at the University of Agricultural Sciences, Bengaluru during his stay in India between 1960 and 1970.
9. V. V. Ramamurthy (Indian Agricultural Research Institute, New Delhi) explained that this document was a hand-out distributed to the attendees of the symposium on 'Integrated Control' at New Delhi during 20–24 January 1969.
10. An electronic copy of the second volume of *Indian Journal of Entomology* (1940) is available at <https://archive.org/details/in.ernet.dli.2015.267941/page/n0> (National Digital Library of India, Kharagpur).
11. Augustus Daniel Imms, worked as an entomologist at the Forest Research Institute, Dehra Dun. During this stay, he explored lac cultivation in the Central Provinces (approximately, the state of Uttar Pradesh) and insects attacking the Coniferae (currently Pinophyta) in the Himalaya. In 1913, he left India. His *General Textbook of Entomology*

(Including the Anatomy, Physiology, Development and Classification of Insects), first published in 1925 (Methuen, London, p. 698) is well known.

12. König was a missionary – medical doctor attached to the Tranquebar Mission (also known as the Halle Mission, Evangelical Lutheran Mission) established in Tranquebar (11°1'N; 79°50'E) by Frederick IV, King of Denmark. König trained in medicine with Carl Linnæus in Uppsala, Sweden.
13. The announcement in *Nature* (1948) indicates the name of the proposed journal by the Zoological Society of India as the *Journal of the Zoological Society of India*, whereas the current internet site of the Zoological Society, Kolkata, indicates the journal as the *Proceedings of the Zoological Society*.
14. William Wilson Saunders (1809–1879), who spent considerable time in India as an insurance broker maintaining an amateur interest in Indian plants and insects, exhibited males and females of live *Phyllium siccifolium* collected from the country at a meeting of the Entomological Society of London held on 3 August 1835 (see, *Trans. Entomol. Soc. London*, 1836, I, lxxv).

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