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Lecanidae is one of the largest and most speciose families of Indian Rotifera (Sharma 1996, 1998). Our recent evaluation of Lecanidae diversity in India (Sharma & Sharma 2014) highlighted various dubious lecanid reports in several routine rotifer faunal surveys without any

voucher specimens to warrant any validation, while the fuzzy descriptions of new *Lecane* species from this country and the lack of deposition of their type specimens aggravated taxonomic discrepancies. A compilation of rotifers by Dhanapathi (2000) relying on misidentifications and poor illustrations of the taxon added to such anomalies. This trend has continued unabated in a report on Lecanidae from Andhra Pradesh by Siddiqi & Karuthapandi (2013). This communication attempts to review the said report with emphasis on misidentifications, nomenclature discrepancies and validity of different species to warrant rectification of anomalous reports and provide a list of valid species from the state.

This validation of *Lecane* spp. reported by Siddiqi & Karuthapandi (2013) from Andhra Pradesh is undertaken as a part of our ongoing work on 'Monograph of Indian Freshwater Rotifera'. Our comments are based on the said published report vis-à-vis our own examination of Lecanidae collections from different parts of India including those from Andhra Pradesh. The present remarks are supplemented with micro-photographs taken with Leica DM 1000 stereomicroscope fitted with Leica DM 295 image analyzer.

Of the different new records from Andhra Pradesh (Siddiqi & Karuthapandi 2013, Images 1-6): *Lecane aculeata*, *L. haliclysta*, *L. furcata*, *L. pawlowskii*, *L. pyriformis* and *L. ruttneri*; all except *L. pyriformis* are misidentifications. *Lecane bidentata*, described by Dhanapathi (1976) from Andhra Pradesh without deposited type, was categorized as *species inquirenda* by

### Remarks on 'A report on Lecanidae (Rotifera: Monogononta) from Andhra Pradesh, India': misidentifications and status

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Segers (1995, 2007) and Jersabek & Leitner (2013); it has been placed on the B-list of the "List of available names" (Segers et al. 2012) and as such suggested for removal from zoological nomenclature ([http://89.26.108.66/LAN\\_CandidatePart-Rotifera-2012-03-22.pdf](http://89.26.108.66/LAN_CandidatePart-Rotifera-2012-03-22.pdf)). *Lecane donnerianus* Dhanapathi, 1976, described from this state, has been synonymized (Segers 1995) with *L. ungulata*. The unwarranted listing of these taxa as valid species has been continued by Siddiqi & Karuthapandi (2013). In addition, our remarks on status of various species are summarized in Table 1.

In light of the above remarks, we conclude 22 valid *Lecane* species known from Andhra Pradesh instead of 33 and 26 species listed by Siddiqi & Karuthapandi (2013) and Karuthapandi et al. (2013), respectively. These are:

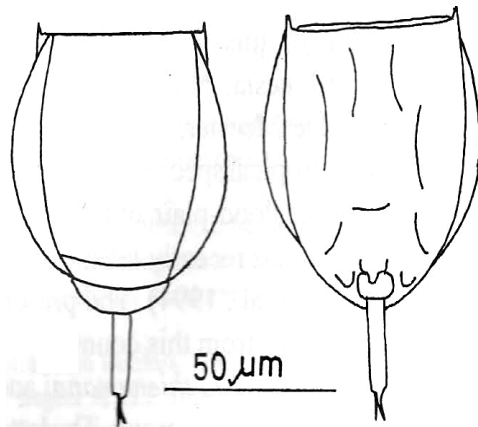
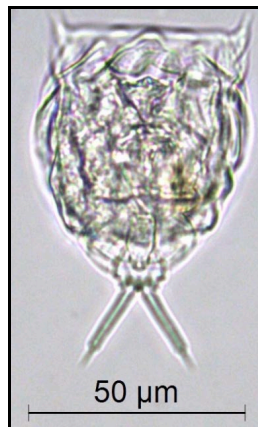
1. *Lecane arcula* Harring, 1914
2. *Lecane bulla* (Gosse, 1851)
3. *Lecane closterocerca* (Schmarda, 1859)
4. *Lecane curvicornis* (Murray 1913)
5. *Lecane eswari* Dhanapathi, 1976
6. *Lecane furcata* (Murray, 1913)
7. *Lecane hamata* (Stokes, 1896)
8. *Lecane hastata* (Murray, 1913)
9. *Lecane hornemanni* (Ehrenberg, 1881)
10. *Lecane inopinata* Harring & Myers, 1926
11. *Lecane leontina* (Turner, 1892)
12. *Lecane luna* (O. F Muller, 1776)
13. *Lecane lunaris* (Ehrenberg, 1832)
14. *Lecane obtusa* (Murray, 1913)
15. *Lecane papuana* (Murray, 1913)
16. *Lecane pyriformis* (Daday, 1905)
17. *Lecane quadridentata* (Ehrenberg, 1832)
18. *Lecane stenroosi* (Meissner, 1908)
19. *Lecane tenuiseta* Harring, 1914
20. *Lecane tryphema* Harring & Myers, 1926
21. *Lecane ungulata* (Gosse, 1887)
22. *Lecane unguitata* (Fadeev, 1925)

Lecanidae of Andhra Pradesh is less species-rich than that documented from several other states of India (Sharma & Sharma 2014). This misleading generalization is attributed to the fact that Rotifer fauna of this state

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Table 1. Remarks on misidentifications and taxonomic status

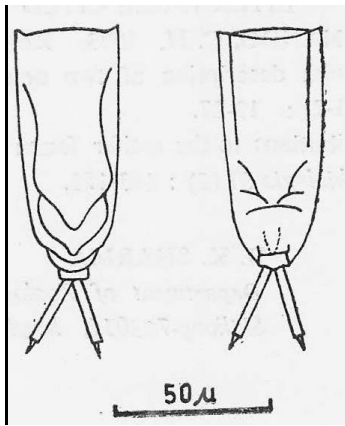
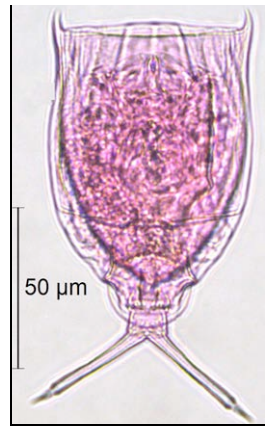
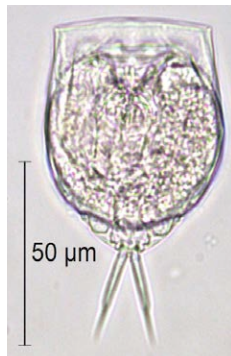
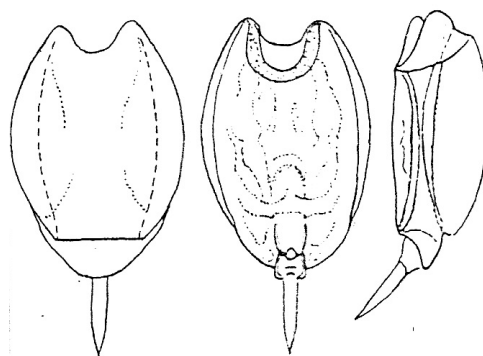
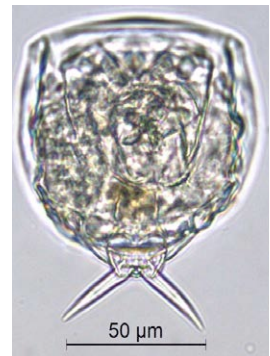
	Species	Remarks
1	<i>Lecane acronycha</i> Harring & Myers, 1926	= <i>L. curvicornis</i> (Murray, 1913). Not a synonym of <i>L. acanthinula</i> (Hauer, 1938) (Figs. 1–2)
2	<i>Lecane aculeata</i> (Jakubski, 1912)	Misspelled as ' <i>aculeate</i> ' in the list and it is a misidentification. Siddiqi & Karuthapandi (2013, Image 1) referred to <i>L. arcula</i> Harring, 1914 (Fig. 3) which distinctly differs from <i>L. aculeata</i> (Fig. 4) in size of its antero-lateral spines.
3	<i>Lecane batillifer</i> (Murray, 1913)	Questionable record warranting validation; never reported from Andhra Pradesh by Dhanapathi (1976) as erroneously listed by Siddiqi & Karuthapandi (2013). This interesting Australasian species is so far observed (Fig. 5) from India only from its northeast region (Sharma & Sharma 2014)
4	<i>Lecane bidentata</i> Dhanapathi, 1976	<i>species inquirenda</i> (Segers 1995, 2007; Jersabek & Leitner 2013); definitely not even distantly related to and not a synonym of <i>L. batillifer</i> (Murray, 1913)
5	<i>Lecane vasishti</i> Sharma, 1980	Misspelled as ' <i>vasishti</i> ' - a distinct species (Sharma & Sharma 2014) so far known only from its 'type locality' in West Bengal (Figs. 6–7); not a synonym <i>L. crepida</i> Harring, 1914 (Fig. 8) and it differs distinctly from the same.
6	<i>Lecane donnerianus</i> Dhanapathi, 1976	= <i>L. ungulata</i> (Gosse, 1887); not a synonym of <i>L. donneri</i> Chengalath & Mulamoottil, 1974
7	<i>Lecane furcata</i> (Murray, 1913)	A misidentification; Siddiqi & Karuthapandi (2013, Image 5) apparently showed <i>L. lunaris</i> (Fig. 9) and it differed distinctly from <i>L. furcata</i> (Fig. 10)
8	<i>Lecane haliclysta</i> Harring & Myers, 1926	A misidentification; Siddiqi & Karuthapandi (2013, Image 5) apparently referred to <i>L. tenuiseta</i> Harring, 1914 (Fig. 11)
9	<i>Lecane lauterborni</i> (Hauer, 1924)	Reported by Dhanapathi (1976) from Andhra Pradesh. It is a case of misidentification (refer: Segers & Savatnalinton 2010; Sharma & Sharma 2014)
10	<i>Lecane pawlowskii</i> Wulfert, 1966	A misidentification and misspelled as 'Wulfert'; Siddiqi & Karuthapandi (2013, Image 3) appeared to refer to a partly contracted <i>L. closteroerca</i> (Fig. 12). <i>Lecane pawlowskii</i> - an Indian endemic (Figs. 13–15) is known till date from Gujarat (type-locality) and West Bengal (Sharma & Sharma 2014).
11	<i>Lecane ohioensis</i> (Herrick, 1885)	A distinct species and not a synonym of <i>L. obtusa</i> (Murray, 1913)
12	<i>Lecane ploenensis</i> Voigt, 1902	Misspelled as ' <i>ploensis</i> '; not a syn. of <i>L. pideis</i> (Harring & Myers, 1926) (apparently misspelled) which itself not any valid species
13	<i>Lecane ruttneri</i> (Hauer, 1938)	A misidentification as Siddiqi & Karuthapandi (2013, Image 4) apparently showed <i>L. hornemanni</i> (Fig. 16)
14	<i>Lecane tethis</i> (Harring & Myers, 1926)	= <i>L. furcata</i> (Murray, 1913); not a synonym of <i>L. tenuiseta</i> Harring, 1914
15	<i>Lecane stichoclysta</i> Segers, 1993	Never reported from Andhra Pradesh by Dhanapathi (1976) and not known till date from India
16	<i>Lecane styra</i> (Harring & Myers, 1926)	A distinct species, not a synonym of <i>Lecane stichoclysta</i> Segers, 1993

Figures 1–2. *Lecane acanthinula* (Hauer)Figure 3. *Lecane arcula* HarringFigure 4. *Lecane aculeata* (Jakubski)Figure 5. *Lecane batillifer* Hauer

is yet partly explored. Of the documented species, *L. eswari* merits biogeographic interest as this erstwhile Indian endemic is a Palearctic species (Sharma & Sharma 2009, 2014; Segers & Savatnalinton 2010)

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Figures 6–7. *Lecane vasishtii* SharmaFigure 8. *Lecane crepida* HarringFigure 9. *Lecane lunaris* (Ehrenberg)Figure 10. *Lecane furcata* (Murray)Figure 11. *Lecane tenuisetata* Harring, 1914Figure 12. *Lecane closterocerca* (Schmarda)Figures 13–15. *Lecane pawlowski* Wulfert (after Wulfert, 1966)Figure 16. *Lecane hornemanni* (Ehrenberg)

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