Figure 1. Plastic litter (***a***) near Sipakuda inlet (the eastern region of the lagoon), (***b***) Barkul jetty (western region) and (***c***) Rushikulya rookery.

being a paradise of thousands of migratory and resident birds coming from far away places like Caspian Sea, Lake Baikal, Aral Sea and remote places of Russia, Mangolia, central and southeast Asia, etc., may face a similar repellent situation owing to dense accumulation of plastic bags.

It has been widely reported that the discarded and lost fishing nets in wetlands continue to trap and catch fishes and other valuable species, which is commonly known as 'ghost fishing'. In the Chilika lagoon also, instances of fish and shellfish trapping in damaged and discarded nets have been reported. This is a cause of concern with regard to conservation of biodiversity.

The Chilika lagoon is connected to the Bay of Bengal close to the Olive Ridley sea turtle mass nesting site of Rushikulya estuary. The turtles during their migration and stay in the coastal waters are often entangled in the nets and die due to drowning. Further, they often ingest plastic litters that enter into coastal waters and face serious health problems, often leading to death. Thus plastic litter fall into Chilika lagoon indirectly affects the Olive Ridley turtle population also. The plastic waste thrown on the shore interferes with the nesting process on the beach.

Plastic residues floating in water attract and hold polychlorinated biphenyl (PCB), dichlorodiphenyltrichloroethane (DDT), dichlorodiphenyldichloroethylene (DDE), etc. which are hydrophobic and highly toxic[2]. They are capable of uptaking one million times their background levels of these toxic materials, which are not readily soluble in water[3]. The plastic litters with accumulation of such toxic pollutants act as poison pills to many organisms when they ingest the plastic remains found suspended in water along with food stuff. The Chilika Lake receives PCB, DDT and DDE and other such toxic pollutants as residues from a variety of sources. The plastic remains in the Chilika water, therefore, are bound to absorb these toxic compounds that are ultimately eaten by birds and fishes having serious ecological consequences.

The key to solve the litter problem in marine environment is their management at source that can be achieved through waste prevention, minimization, reuse and recycling. Three measures (3Rs) such as reduce, reuse and recycle are recommended to combat this pollution. As regards to the Chilika lagoon, which is vulnerable to a series of environmental hazards, the best option could be imposing a strict ban on the usage of plastic materials and disposal of such waste directly or indirectly into the lagoon. Such an exercise can only reduce the plastic litter pollution of this precious brackish water lagoon and its inhabitants. The need of the hour, therefore, is proper quantification of plastic litters entering the lake system from various sources and selection of the best option for their management. It should be one of the important components of the Chilika management exercise taken up by the government under its Integrated Coastal Zone Management plan.

1. Sandilyan, S. and Kathiresan, K., *Curr. Sci*., 2012, **103**, 1262–1263.
2. Dharani, G., Abdul Nazar, A. K., Venkatesan, R. and Ravindran, M., *Curr. Sci*., 2003, **85**, 574–575.
3. Mato, Y., Isobe, T., Takada, H., Kanehiro, H., Ohtake, C. and Kaminuma, T., *Environ. Sci. Technol.*, 2001, **35**, 318–324.

ACKNOWLEDGEMENTS. We thank the Head, Department of Marine Sciences, Berhampur University for encouragement and facilities. B.K.S. and P.P. thank DST, New Delhi for financial support.

BIRAJA KUMAR SAHU*
PREMALATA PATI
R. C. PANIGRAHY

Department of Marine Sciences,
Berhampur University,
Bhanja Bihar,
Berhampur 760 007, India
**e-mail: birajkumar@gmail.com*

New host record for *Nerocila sigani* (Isopoda: Cymothoidae) from Odisha coast, India

The isopod parasite *Nerocila sigani* was first described from the Persian Gulf by Bowman and Tareen[1] from the rabbit fish *Siganus oramin* (Bloch and Schneider). They also described another species[1], *Nerocila* (*Nerocila*) *arres* from five different fish species, namely *Siganus oramin* (Siganidae), *Epinephilus tauvina* (Epinephilidae), *Acanthopagrus latus* (Sparidae), *Nemipterus japonicus* and *Nemipterus tolu* (Nemipteridae) which is synonymized under *Nerocila sigani*.

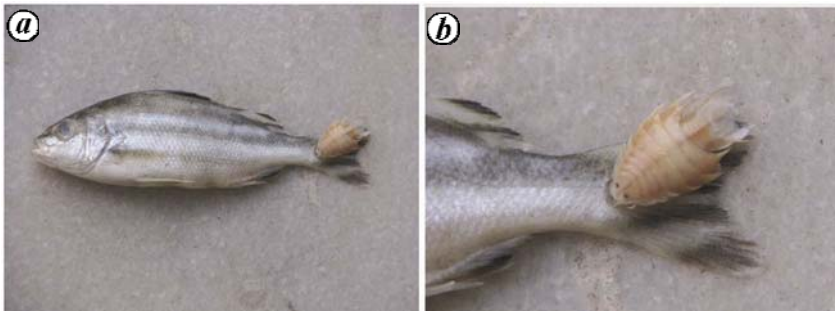

Figure 1. ***a***, *Nerocila sigani* on its host *Terapon theraps* Cuvier. ***b***, Enlarged view of (***a***).

Subsequently, Bruce and Harrison-Nelson[2] recorded this isopod from six different hosts belonging to three families, viz. *Sciaenia dussumieri*, *Argyrosoma hololepidotus*, *A. macrocephalus*, *A. nibe* (Sciaenidae), *Parastromateus niger* (Carangidae) and *Pomadasys* sp. (Pomadasydae). They found this species to occur in *P. niger* in Tamil Nadu, India (exact locality not cited). In 2001, Kensley[3] also reported this isopod from Gujarat coast (34–37 fathoms) and Andaman Sea without supplementing any host record.

While surveying 'mangrove fauna of Odisha coast' during April 2011, we came across this species at Paradip Fishing Harbour. The parasite was observed to occur on the fish *Terapon theraps* Cuvier (locally known as 'Kunkunia'). It was found attached to the base of the caudal fin of the fish (Figure 1). A total of nine specimens were collected, of which, eight specimens were without any host and were all females. The non-ovigerous females varied from 17.0 to 25.0 mm in length and 9.0 to 19.0 mm in breadth. The ovigerous female studied was 18.0 mm in length and 17.0 mm in breadth. The single male specimen measured 16.0 mm in length and 6.0 mm in breadth. The present report of this parasite from *T. theraps* is a new host record for this fish. With this, the distribution of the parasite is further extended up to Odisha coast of eastern India.

The specimens examined agree in general with the description of Bowman and Tareen[1], differing only in pleotelson which is about as long as breadth in the specimens examined (versus pleotelson about one-third wider than long). Serration of exopod of uropod is deep in the lateral margin. Faint serrations are also observed in the inner margin.

N. sigani is a widely distributed species of the Indo-Pacific region being recorded from South Africa, the Persian Gulf, Red Sea, Madagascar, Sri Lanka, Malay Peninsula (Penang) and Taiwan.

1. Bowman, T. E. and Tareen, I. U., *Smithson. Contrib. Zool.*, 1983, **382**, 1–30.
2. Bruce, N. L. and Harrison-Nelson, E. B., *Proc. Biol. Soc. Wash.*, 1988, **101**, 585–602.
3. Kensley, B., *Crustacean Issues*, 2001, **13**, 205–264.

ACKNOWLEDGEMENT. We thank Dr K. Venkataraman, Director, Zoological Survey of India, Kolkata for providing the necessary facilities.

M. K. DEV ROY*
S. MITRA

Crustacea Section,
Zoological Survey of India,
27, Jawaharlal Nehru Road,
Kolkata 700 016, India
**e-mail: malay_7@rediffmail.com*

Present status of eucalyptus gall insect, *Leptocybe invasa* (Fisher and LaSalle) in Tamil Nadu

The spread of invasive alien species (IAS) is recognized as one of the greatest threats to the ecological and economic well-being of a country. They cause enormous damage to biodiversity and the valuable natural ecosystems on which we depend. In the recent past, many alien species of insects have invaded India affecting forest, agricultural and horticultural production. Scientific management of these has not been fully understood. The eucalyptus gall wasp, *Leptocybe invasa* (Fisher and LaSalle) (Hymenoptera: Eulophidae) is one such species that warrants scientific study. Eucalyptus gall insect problem has been reported from several parts of India[1–4]. The insect forms galls on the leaf midrib, petioles and stems of seedlings and saplings as well as coppice shoots, young coppice and nurseries resulting in the stunting of growth[5]. Galls induced by this wasp can also cause severe injury to young trees and may seriously weaken them. The Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore undertook extensive surveys in the eucalyptus plantations in Tamil Nadu during 2007–2009 to assess the extent of infestation by the pest. In order to enhance productivity, many paper companies and farmers are planting high-yielding clones. Many eucalyptus plantations containing the clone C10 have been abandoned since it was considered as the most susceptible clone, which farmers prefer to grow for more biomass.

Adoption of classical biological control mechanism kept the population of gall wasp under check. When an alien pest is accidentally introduced and established in a new area, it is usually without the complex of natural enemies that control it in its native location. It is generally considered that some of the most effective natural enemies of an organism are those that have co-evolved with it in its native habitat. Therefore, some of the most dramatic successes in biological control have resulted from importing natural enemies from other countries, a practice often called classical biological control. Nevertheless, there are reports on the existence of gall wasp menace in some parts of Tamil Nadu. In order to monitor the spread of the pest and the damage caused, a survey was undertaken in different eucalyptus-growing tracts, particularly in the areas of Tamil Nadu Forest Development Corporation