Figure 1. Fallen *Areca catechu* leaf acting as breeding source of *Aedes albopictus.*

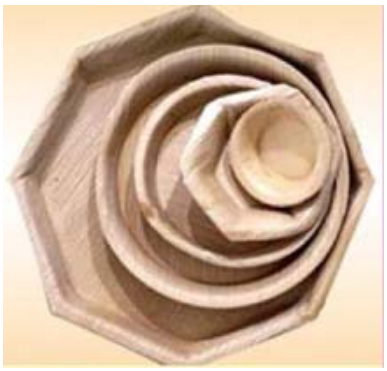

Figure 2. Disposable plates made using *A. catechu* leaves.

acted as the major breeding habitat for *Ae. albopictus* (Figure 1).

The making of disposable dishes such as plates made out of areca palm leaves (Figure 2) is a well-thriving industry in India, with international export avenues. This small-scale industry could be promoted to provide income to the rural community. Crude estimates reveal that 532 crore palm leaves are shed from the areca plantations in India every year[8].

We propose that the local community collect and process these fallen arecanut palm leaves to make disposable plates, etc. This would generate employment and income to the local rural community. Also, this could be an alternative for plastic cups, plates and other containers, another important source of *Aedes* mosquito breeding. The by-product of this activity would be a drastic reduction of *Ae. albopictus* vector population and thereby chikungunya fever in the regions.

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Rice cultivation is not cause for climate change

There is a discussion in the scientific circles that methane emission from rice cultivation is an important cause for climate change, with methane being one of the greenhouse gases (GHGs)[1–4]. Some argue that during the past 200 years we have witnessed an increase in methane emission. If it were so, I wonder how although rice cultivation has existed since times immemorial, no climate change was ever observed earlier, but only in the past 200 years, and more so in the past 50 years.

There seem to be ulterior motives from some quarters in the West to blame rice cultivation to escape from themselves being targeted for the GHG emission. People in the West do not want to forgo their luxurious lifestyles and hence want to find an alibi to shift the focus onto rice cultivation as the culprit of methane emission, for which some scientists are ready to provide data in their favour. A few also argue that organic carbon available in the rice fields might enhance methane production, and hence organic cultivation would be a problem and chemical fertilizers would mitigate this to some extent. This is again unacceptable for the simple reason that organic cultivation prevailed thousands of years before chemical fertilizers came into existence. Only in the past 50 years usage of chemical fertilizers has seen a boom, and methane emission and climate change also correspond to this period. Hence organic cultivation has nothing to do with methane emissions.

If somebody wants to subscribe to the argument that rice cultivation has indeed been the cause for GHG emissions, then he/she should let people know what happened during the past 10,000 years when rice cultivation was very much present, with rice being the staple food. It would be more agreeable if industrial revolution of the past 200 years and aerosols released from motor vehicles, smoke from different factories, etc. are considered as the causes for GHG emissions and climate change.

Even if methane is generated in the rice fields, the group of bacteria belonging to methylotrophs and methanotrophs would consume the gas in the immediate vicinity, as the same rice fields would serve as reservoirs for propping up of methylotrophs. Since rice fields that have standing crops are almost static units in terms of various parameters, the role of methanotrophs/methylotrophs in mitigating methane produced by methanogens and how they balance the methane table in rice fields should be investigated thoroughly.

One advantage with the argument that methane generated from rice fields leads to climate change is that if it gains more acceptance the same would lead to a shift towards the cultivation of other less water-demanding crops, so that inter-state water disputes in our country could be

solved easily. The other advantage is that it allows more agrobiodiversity, as more number of cereal crops could be grown and revived.

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Devaluing classic Indian literature on science

Scientific literature of the past/present is an asset to the scientific community. In biological sciences monographs/floras are key books and high value documents emerging from hard and painstaking systematic work of scientists, and important to those who are deeply involved in inventorying and mapping of biodiversity. These 'works' are always highly priced[1–3] and there are rare ones costing even more. Below I cite an example of our negligence to the classic work done by our scientists in the past.

Recently, I came across some publications which were on sale at the ICAR Headquarters at a discounted (40%) price. There was an era of writing monographs which was initiated in 1950s and several excellent works appeared on algae (the present known algal diversity is based on these classic monographs), fungi and agriculture. A few examples are given below.

Algae

Ulotrichales by K. R. Ramanathan, 1964, p. 183, with 52 plates on glossy paper and hard bound, price Rs 21.10 and discounted price Rs 13.00, ICAR, New Delhi. This monograph includes introduction, classification and delimitation of orders, description of families (3), genera (18), species, bibliography and index.

Vaucheriaceae by G. S. Venkataraman, 1961, p. 112, with 72 figures on glossy paper and hard bound, price Rs 17.00 and discounted price Rs 10.00, ICAR, New Delhi. The book contains an historical account, classification and affinities, occurrence and distribution, structure of thallus, reproduction, generic differentiation and species description, bibliography, index to authors, genera and species.

Oedogoniales by Ella A. Gonzalves, 1981, p. 757, with more than 600 figures (profusely illustrated), hard bound, price Rs 56.25 and discounted price Rs 34.00, ICAR, New Delhi. The monograph contains two parts. Part I – Introduction, occurrence, and distribution, ecology and physiology, morphology and cytology, vegetative and asexual reproduction, dispersal and periodicity, status and relationship. Part II – Taxonomic account of order and species of the three genera, bibliography, addenda and index.

Volvocales by M. O. P. Iyengar and T. V. Desikachary, 1981, p. 532, with 275 line drawings and 44 TEM plates, price Rs 90.00, discounted price Rs 54.00, ICAR, New Delhi. Part I – Structure and reproduction and Part II – Systematics: families (15), genera (116) with descriptions of species, additions to Indian volvocales with 52 taxa new to science along with their Latin diagnosis.

Charophyta by B. P. Pal, B. C. Kundu, V. S. Sundarlingham and G. S. Venkataraman, 1962, p. 130, with 296 figures, price Rs 15.00, ICAR, New Delhi. This publication is now out of print. It includes classification, distribution and ecology, general morphology, vegetative structure and reproduction, cytology, economic importance, fossil charophytes, living charophytes, characters used in the identification of species of Nitelleae and Chareae, bibliography, recent additions and index to genera and species.

Zygnemaceae by M. S. Randhawa, 1959, p. 478, with 521 figures, hard bound, price Rs 90, ICAR, New Delhi. This publication is now out of print. It includes introduction, classification, families, subfamilies, genera, evolution and affinities, family Zygnemaceae, occurrence and distribution, structure of the cell, reproduction, characters used in the identification of species of 13 genera, bibliography, index to genera and species.

These monographs contain a wealth of information on diversity and give an authoritative account of discovered or known taxa of our country. These monographs give at first instance, the diversity known in this country and a lot of work needs to be done on the useful compounds (metabolites) for human beings. Apart from this, the monographs are an inspiration/source to 'infant' monographers, and those interested in algal diversity and the origin and survival of Protists since Eocene. These are a good source to understand biology as a subject – lifecycle pattern, cytological events and reproduction in these tiny, photosynthetic plants. These algae are surviving since 500 My and are a food source for aquatic animals.

Fungi

The Myxomycetes of India by K. S. Thind, 1977, p. 452, with 165 figures, hard bound, price Rs 40.25 and discounted price Rs 24.00, ICAR, New Delhi. The monographs include: Part I: General – Economic importance, morphology and terminology, reproduction, cytology, cultivation in laboratory, geographical distribution, collection and preservation, systematic position and general taxonomy. Part II: Systematic account of the Indian myxomycetes, references and index.

Hyphomycetes by C. V. Subramanian, 1971, p. 930 with 475 figures, hard bound, price Rs 50, IARI, New Delhi. The monograph includes: Part I – General account inclusive of introduction, structure and reproduction, habitats, importance as plant pathogens, importance in industry, pure cultures, heterokaryosis, classification, relationship to perfect states, nomenclature, Indian work and bibliography. Part II – Systematic account, key to genera, description of genera and species recorded from India and those of