

## Astro-Ethnobiology: I. Introducing a New Sub-Discipline

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**KEYWORDS** Ethnobiology. Astrology. Astro-ethnobiology. Biological Ecology

**ABSTRACT** The paper presents the interdisciplinary nature of the subject Ethnobiology and its various sub-disciplines with the emergence of a new branch of it, Astro-Ethnobiology, that explores the planetary influence on biological ecology.

### INTRODUCTION

Coining of the term 'Ethnobotany' by Harshburger in 1895, with a limited scope of the subject to point out the plants used by the aboriginals, is said to be auspicious for the emergence of the science of Ethnobiology as existing today to explore the relationship between man and the surrounding biota, with a different view point. In 1916 Robins et al. broadly defined the area of Ethnobotany, which entails the study of all aspects of plants amenable for human consumption. Mostly the earlier studies in Ethnobotany has included Economic Botany and study of the indigenous knowledge of tribals related to usage of plants in their food, medicine, culture, music and life style with a wider sense (Schultes, 1941, 1960; Faulka, 1958; Richard, 1978). In course of time Ethnobotany was realised to be with its much broader scope, than what it was expected to be. In the present scenario the interdisciplinary nature of the subject (Maheswari, 1987; Jain, 1987) is well realised, with the interaction of various branches of science (Manilal, 1989) such as: (1) Food and Nutrition, (2) Defence and Survival, (3) Sociology and Culture, (4) Religion and Social Customs, (5) Medicine, (6) Art and Literature, (7) Mythology, (8) Archaeology, (9) Anthropology, (10) Forestry and Agriculture, (11) Economics, (12) Wood Science, (13) Language and Linguistics, (14) History and Politics, (15) Ecology and Conservation. In this context some of the important sub-disciplines of Ethnobotany can be focussed such as: Ethno-taxonomy, Ethno-mycology, Ethno-ecology, Ethno-Pharmacology,

Ethno-medicine, Ethno-toxicology, Ethno-musicology, Archaeo-ethnobotany, Palaeo-ethnobotany, Ethno-gynaecology, Ethno-narcotics, Ethno-paediatrics, Ethno-agriculture etc, and all these aspects are discussed widely by Jain (1987, 2001). Ethnobotany subsequently developed to ethnobiology, also lays emphasis on germ plasm conservation, study of sacred groves and exploration of knowledge of women society on various use of plants and animals and many other aspects. The all India co-ordinated Research Project on Ethnobiology (Puspangandan, 1985) has much to speak about it.

The division of the above sub-disciplines does not very much distinguished one from another except concentration on a specific subject. The source of data may broadly remain the same for all, but the methods of study will vary for each sub discipline (Jain, 1987). The various sources of information can be practically divided into four types (1) Information with people, (2) Practice of people, (3) Field Study and (4) Study of Literature (Dash, 1998). Irrespective of the source of information, the man biotic relationship can be categorised into two groups as follows:

- 1) *Abstract / cultural / spiritual relationship* includes faith, good and bad powers of plants and animals, taboos, avoidance, sacred plants and animals, their worship and folklore.
- 2) *Concrete / material relationship* deals with the materials used by human beings as food, medicine, house building, agriculture, domestic use, trade and barter, fine arts, painting, carving, house decoration etc.

Above all, the latest grouping on men-biotic association emphasises on relationship (1) useful

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both to men and biota, (2) useful to men, harmful to biota, (3) useful to biota, harmful to men and (4) harmful to both men and biota (Mohapatra, 2003), following the trends as outstanding so far (Jain, 2001).

It may be focussed here that, the various sub-disciplines, source of information and men-biotic relationship realised in the study of Ethnobotany, are also the deemed sub-disciplines of Ethnobiology. Even though, the research in this line depends upon the objective irrespective of methodology, that can be broadly put into two categories, viz. 1) Field research and 2) Literary Research (Jain, 1987; Jain and Rao, 1983; Padhy, 1998; Jain, 2001).

Ethnobiology, as an interdisciplinary subject, has broader scope of research from scientific and social point of view and has expanded tentacles to interact with any system. In the present paper an attempt has been made by the authors to introduce a new sub-discipline 'Astro-Ethnobiology' emphasizing the biological interaction with the Astral system. This new sub-discipline would open a new vista in literature research to restudy the astrological aspects with an ethno-biological approach, lacking as on date.

#### WHAT IS ASTRO-ETHNOBIOLOGY?

The proposal for the introduction of Vedic Astrology as a subject in the university academic curriculum, is on the rapping of positive and negative opinion in Indian scenario, as witnessed through various media. Many people have the opinion that, "Astrology is not a science" (Bhargava, 2001), while others claim that "Astrology is a science by subject, and an art by application (Somaya, 2001); and more precisely and broadly as well that it is "the Science of the past is also going to be the science of the future" (Chabbra, 2001). We must confess that in spite of any negative opinion on astrology, we can not check curiosity about the future and make ourselves free from the belief that the planets influence our good and bad periods, health, wealth and social status including our birth and death since time immemorial. Moreover, Astronomy and mathematics are given the status of *Vedaanga*, which is one of the six sciences (1. *Ssiksha* : Phonetics – Pronunciation, 2. *Chchandasa*: Metre-Science of verse forms and Poetic metres – prosody, 3. *Vyaakaranana*: Grammar, 4) *Nirukta* : Etymology, 5) *Jyotisha* :

Astronomy and Mathematics, 6) *Kalpa* : Religious ceremony, which are regarded as auxillary subdivisions of Veda.

In every language and every state of India, Almanac (*Panjikaa*) is prepared on the basis of observations and calculations of the astral positions of sun and other planets and as well movement of the different meteorites (heavenly bodies) as a guide line to determine the specific time for auspicious daily rituals, functions, onset of journey, commencement of education, preparation and consumption of medicines, weather forecast, apprehension / detection of natural calamities, changes in political scenario, starting of business or house constructions and various agricultural aspects and prospects etc. This is how the impact of astrology can be realised in most of the routine curricula in Indian context, which holds good to a substantial percentage from socio-ecological point of view.

Moreover, evidences on ancient Indian Science can be realised and conceived from the contributions of different legendary scientists (Seal, 1915; Haward, 1926; Majumdar, 1927; Choudhury, 1932; Sircar, 1950; Hora, 1953; Satyaprakash, 1965; Ssaastri, 1970 and Dash, 1998, Mohapatra, 2003). But the Indian Astrological science is the most advanced one amongst all Hindu attainments in positive sciences in ancient days (Raman, 1998). If the Indian myth (Padhy et al., 1999, 2001a; Panigrahi et al., 2002a,b) and ethics (Padhy, 2000, Padhy et al., 2001) have scientific insights, which are revealed out on proper analysis, there should not be any ambiguity on the scientific basis of Indian astrology, which is comparatively much more methodical, established and developed. More to add here, the role of Astrology in determination of Health prospects and causes of diseases (Kothare, 2002; De, 2002), understanding the behavioural psychology (Goel, 2002), prediction of climatic changes, forecasting of natural calamity, earth quakes (Chopra, 2002) and explanation for Vastu with Cosmo terrestrial energetic approach (Babu, 2002) are more convincing as scientific.

In this context from ethnobiological point of view, Indian astrology, originally scribed in Sanskrit literature, should be explored in order to bring out the hidden biological science in it. A well established fact that not only the human beings but even a minute creature, may be a plant, animal or a micro-organism what so ever,

is under the influence of the forces of the planets, amenable to this biological world (Baikoli, 1968).

### Kathopanished says

*Yad eva iha tad amutra, yadamutra tad anv iha; Mrtyoh sa mrutyum apnoti, ya iha nanaiva pasyati*  
(2,4,10)

**Meaning:** What is even here, that is there; which is there, the same is here. From death to death he proceeds who here beholds the difference. This explains that there is no difference between here and there i.e. the delusory world and supreme reality (Strange ? / Chinmayananda ?)

The world consists of all the animate and inanimate; among them man is recognised as the supreme creation. The supreme reality which is explained as *Brahman / Paramaatman* and considered as omnipresent and omnipotent, is nothing but the expanded universe, scientifically perceived with Einstein's Equation :  $E = mc^2$  (Capra, 1975). In fact the macrocosmic Universe is represented as the human body in the microcosmic form i.e. the theme of analysis as perceived through Hindu philosophy, *Yoga, Tantra, Aayurveda* and Astrology. This shows that whatever occurs in the planetary world (cosmic level), good or bad, will certainly influence the life process pertaining to any organism, either micro or macro forms and the whole phenomenon needs to be explained through the science of Astrology.

Ethnobiology being an interdisciplinary science, interacting with multidimensional faculties, is required to be corroborated with the astrological prospective. The aim of launching a sub-discipline Astro-ethnobiology is to explore the ethnobiological aspects of Astrology and bring forth the various scientifically unanalysed aspects in it; and if possible, on experimental basis. Our multifarious approach in this regard would be forthcoming in a series in continuation to this communication.

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