

ginating at some distance from it (Figure 1) otherwise the primary radii originate from the focus (Figure 2). The back-calculated lengths using Fraser's equation⁴ have shown that fishes grow faster up to the end of first year (presumably after the larval period) and thereafter the growth slows down compensation in growth occurring at the return of favourable conditions^{5,6}. The scales have been successfully used to determine age and rate of growth in Indian Cyprinids from this part of the country⁷⁻¹⁰.

It is evident from Table 1 that the growth is maximum during the first year of life and thereafter it slows down. However, annual increment (*h*) in some age classes is more than the previous years of life indicating the occurrence of phenomenon of growth compensation. The growth compensation is generally exhibited by long-lived and fast-growing fishes⁹; however, this phenomenon has not been recorded in short lived *Puntius sarana sarana*¹⁰.

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Addendum

Indian biology research at crossroads

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G. Padmanaban writes: 'There has been an inadvertent omission of the first paragraph of the above-mentioned article in my final typescript. I, therefore, request the first paragraph of the article given below may kindly be reproduced.'

Although I have given a grand title to my article, I must say that it will be confined to aspects of modern biology namely Cell and Molecular Biology. This is not to deny the importance of classical biology especially issues of biodiversity, ecology and environ-

ment. In fact, the Indian contribution in classical biology has been significant. In other articles on other occasions, I have highlighted the importance of studying the biology of the total organism. While a reductionist approach has taken us to an understanding of biological phenomena at the level of molecules and genes, it is now essential to go up the ladder using all the molecular techniques and tools available at hand. Thus areas such as Cell Biology, Developmental Biology, Population Biology, Ecology and Environment and even Extra-Terrestrial Biology are of relevance. The simple reason to have a narrow focus in this article is to examine as to the relevance and progress made in modern biology where the investment in the last decade has been significant.