CHAPTER – 1
GENERAL INTRODUCTION

The attraction of a well defined aquarium is undeniable as one watches shoals of beautifully coloured fishes weaving gracefully through luxuriant underwater vegetation. Fish-keeping although not a new hobby, now bears little resemblance to its earlier forms. Technical advances have resulted in making it a modern satisfying hobby that appeals to people everywhere.

Earlier, fish keeping was practiced mainly for commercial purpose only. Examining the history of fishing and fisheries makes it abundantly clear that fishes formed an inseparable part of human diet, hence exploited for thousands of years. This resulted in the over exploitation and alteration of the habit, which formed one of the main reasons why the science of fish biology came in to existence (Royce, 1972).

There has been spectacular growth in the world of fish production and marketing over the past few years mainly because of consumers’ confidence in the nutritional benefits and wholesomeness of fishes. The ornamental aspect of fish culturing is also gradually emerging as a universally accepted hobby. It arouses the curiosity of common man in all sectors of life.
In fact aquarium keeping is the second largest hobby in the world, as aquarium fishes are among the most colorful and trouble free pets that can be kept at home (AnnaMercy, 2003). As more and more people move into flat residences, fish keeping appears to be a practical option (Mayadevi, 1997). While for some aquarists, fish keeping is an extremely intoxicating and creative hobby, for others it relaxes both mind and body, thus having a therapeutic effect (Southik, 1994).

Ornamental fish keeping is now emerging as an important commercial activity. However, the share of India in this field is so insignificant. This sector provides various employment opportunities mostly in rural sector. But this industry is facing various challenges, like over exploitation of wild stock and loss of biological diversity. The fish diversity of India is declining rapidly due to urbanization, pollution, damming and diversion of water for irrigation and power generation, which have in the first few decades, subjected in the natural bodies in general and rivers in particular, to severe stress. Provision of a secure habitat is important to protect the genetic resources of freshwater fish (Sarkar et al., 2007).

Most of the ornamental fishes cultured and marketed in India are exotic species. Our country has a rich and unique biodiversity with a variety of indigenous ornamental fishes. But this resource has not been properly exploited. The Western Ghats of India is a goldmine of tropical ornamental fishes and it is one of the 25 hotspots of the world (AnnaMercy, 2003).

When we consider the scenario in the God’s own country, Kerala, the scene is more conspicuous. Located between the North latitude 8° 17’ 30” and
12° 47’ 40” and East longitude 74° 51’ 57” and 77° 24’ 27”, Kerala is a tiny strip of land with area 38863 sq km in the South-West coast of Indian Peninsula, bordered on the east by forest covered Western Ghats and in the west by Arabian Sea. Enriched with 41 west flowing and 3 east flowing rivers and their tributaries, backwaters (30 estuaries) and brackish water lakes which harbor rich and diversified ichthyofauna of impressive coloration (Ramachandran et al., 2001). The growth of ornamental fish trade in India is very much encouraging. But the ornamental fishes cultured in India are mostly exotic. Our country has a rich and unique biodiversity with a variety of indigenous ornamental fishes. But this resource has not been properly exploited. The potential of streams and rivers of Kerala as a rich source of ornamental fishes is yet to be recognized. Despite being blessed with rich resources of abundant water and all essential parameters for breeding and rearing of tropical freshwater ornamental fishes, India has failed to get a foothold in market for exports.

Provision of a secured habitat is important to protect the genetic resources of freshwater fish. In Kerala, rivers, streams, wetlands and beds of existing protected areas offer good opportunities for creating fresh water aquatic sanctuaries. Presently only a very small fraction of endemic fish biodiversity is being utilized as ornamental fishes.

Blessed with heavy monsoon rains and sloping topography from the Western Ghats, these rivers are swift flowing with limited bed resources. The beautiful varieties of ornamental fishes found here are unique in their own way in
case of beauty and are easily adaptable and acclimatisable to any conditions and hence cater to the demands of aquarists and hobbyists all over the world. In fact, the riverine ornamental fishery resource of Kerala is one of the finest in the world.

In spite of the availability of these resources, Kerala has not started utilizing these resources to her advantage. If judicious collection, transportation and marketing of these resources are adopted on a sustainable basis, this could generate employment opportunities at different levels right from the upstream tribal belts to the urban fish exporting sector. The water bodies of Kerala are blessed with a variety of untapped potential ornamental fish resources. The freshwater ornamental fish fauna of Kerala is biologically more diverse represented by 125 species, majority of them suitable for keeping in home aquarium due to their gorgeous coloration and hardy nature (Ramachandran et al., 2001; Ramachandran, 2002a).

Aquaculture, apart from providing increasing job potential to the unemployment throughout the world, provides great scope for self employment especially in rural areas where inland waters are available in abundance (Jayasree, 1995). Study of fishes is one of the least popular branches of Natural History, the reason being probably that the element in which fishes live, brings their peculiarities and habits, not so prominently before our everyday notice. In fact, for a superficial observer there seems little difference between one kind of fish and another (Jerro, 1994).
The Indian sub-continent has a tremendous diversity of plant and animal species (Gadgil and MeherHomji, 1990). This biodiversity is under constant threat from various human activities. Hence most of the indigenous flora and fauna are now restricted to protected areas and even these protected areas are vulnerable. The Western Ghats form practically unbroken barriers dominating the west coast of the Indian Peninsula for almost 1600 km. It is one of the richest regions with great diversity of biological species (Raju, 2002).

Compared to the rivers in other parts of the country, the rivers of Kerala are short, originating from the Western Ghats, meandering through the narrow strip of land of a maximum width of 130 km and emptying in to the Arabian Sea. The river Achencoil is the ninth largest river in terms of catchment area and sixth in the terms of length among the 41 west flowing rivers of Kerala state. The river has its origin from two hill ranges of Western Ghats, namely, Devarmalai in Pathanamthitta district at an elevation of 700m above sea level. After having a course of 78kms, it joins with Pamba at Veeyapuram. It is considered to be the least polluted river of Kerala.

Another important aspect to be noted is the deteriorating factors that affect the rivers of Kerala. Major threats to the rivers of Kerala are deforestation, construction of dams, discharge of pollutants and finally the serious threat, river sand mining. Mining of river sand is increasing exponentially since early 1970s due to the increasing economic development of the state caused by foreign remittance by the expatriate Keralites (Vishnu et al., 2010). This affects the
stability of river heading to serious environmental problems, especially on the fish fauna of the river. A clear depreciation of fish population in Achencoil River may be accounted for this fact. Indiscriminate sand extraction has made irreparable damages to the physical environment of the rivers.

The hill stream and other water bodies located with Western Ghats are rich in fish fauna. Of the 930 species of fishes recorded in the lentic and lotic freshwaters of India, 168 are found in Western Ghats (Singh, 1994). Annamercy (2003) has reported that the fresh water fish fauna of Western Ghats consists of 296 species out of which 117 is endemic to Kerala. A few studies are available on the fish diversity of Achencoil river system (Jerro, 1994; Swapna, 2009; Fibin et al., 2011).

The Achencoil river basin lies between latitude 9° 1’ to 10° 0’ north and longitude 76° 23’ to 77° 16’ east. The river basin extends on a land strip 1484 sq.km. with a total length of about 128 km across state of Kerala between Western Ghats and Arabian Sea, lying parallel to Kallada river basin in the South and Pamba river basin in the North (Jerro, 1994).

The beautiful varieties of ornamental fishes found in Achencoil River are unique in their own way. The fish fauna includes potential ornamental fishes, adorned with color bands, blotches, spots and colorations of fins and body. The present study is carried on the basis of such an aspect – the biodiversity of ornamental fishes from Achencoil River.

Fundamental knowledge on the biology of aquarium fishes is of utmost importance not only to fill up the lacuna of our present day academic knowledge,
but also in increasing the technological efficiencies of the fish keeping entrepreneurs for evolving judicious pisciculture management in aquaria. An understanding of the feeding biology of a fish is the fundamental requirement needed for its successful maintenance as ornamental fish.

Hence in the present study, two fishes *Rasbora daniconius* and *Danio aequipinnatus* are studied in detail especially, their feeding biology have been carefully recorded. The study also gives special reference to convert these native fishes with beautiful appearance, as aquarium fishes.

The state has rich resource of indigenous ornamental fishes in various river systems that have the potential to earn income to the state. Out of 44 rivers of Kerala, some of them have been surveyed by Arun et al. (1996), Easa and Shaji (1996), Biju et al. (1998), AjithKumar et al. (1999, 2001), Annamercy (2003) and Kurup et al. (2004) etc. Achencoil is comparatively less polluted river that has yet to be explored and studied in detail for ornamentals. Therefore the present study reflects the present scenario of ornamental aquatic biodiversity of Achencoil.
REVIEW OF EARLIER WORK DONE

India is blessed with rich resource of abundant water and rich potential for live tropical fishes. Hence the study of fishes in India started about 200 years ago. The first modern writer on Indian fishes was Bloche whose splendid work ‘Auslande Fiche’ was published in 1785 (Day, 1878). The more scientific and systematic study on the Indian freshwater fish fauna started with, ‘Account of fishes found in river Ganges’ (Hamilton, 1822)

Fish fauna studies of Kerala starts with Sykes (1839), Mc Clelland (1839), Jerdon (1849), Bleeker (1853), Day (1865), Gunther (1868), Hamilton (1877) and Beaver (1877). Day’s “Fishes of Malabar” is considered as the germ for publication of ‘Fishes of India’ (1878). Fish fauna of Kerala was authentically studied by Hora (1923, 1924, 1927 & 1937). The next study was by Pillai (1929) in which he listed 369 species from Travancore region. Mukherji (1931) reported fishes of Bhavani. John (1936) published information on fishes and fisheries of Travancore. Other than the survey and documentation carried out by Hora (1923, 1927, 1936, and 1937), the work of Fraser (1937) and the combined work of Hora and Mukherji (1938) also brought out information of the freshwater fishes of various river systems of India.

Studies concentrated in Southern parts of Western Ghats i.e., South of Palghat Gap includes Hora (1936), Hora and Law (1941), Hora and Nair (1941), Raj (1941), Hora (1942), Hora and Misra (1942) who described fishes in Mysore and adjacent areas. Chacko (1948) made detailed study of indigenous fishes of
Periyar Lake. Later, Silas (1949, 1951a, b, 1952, and 1954) documented the fishes of Travancore region. Menon (1950) also made strenuous work on the fishes of Kerala. Chacko et al. (1953) has made a detailed report on hydrobiology of Malampuzha River with reference to development of fisheries in Malampuzha reservoir. The most extensive and systematic work on Rasboras was done by Brittan (1954). Freshwater fishes inof Bhavani river was studied by Rajan (1955). Menon and Krishnamurthy (1955) reported on the trout fisheries in the Nilgiris. Alikunnhi (1957) analyzed different types of fish culturing in India.

Menon (1962) depicted the geography of the freshwater fishes of the genus, Rasbora bleeker. Sreenivasan (1968) made a detailed study on the limnology of tropical impoundments in Niligiris. A report on the survey of cold water fishery resources in Kerala, Tamilnadu and Karnataka were made by Sehgal (1971a, b&c). Later Thobias (1973) did a detailed study on the fishes of Trichur district while Antony (1977) studied the hill stream fishes in the same area.


Study on the fishes of lower reaches and wetland in Trichur district was done by Inasu (1991). Kingston (1991) studied the rich segregation of fish assemblages in Vamanapuram River. Indra (1992) reported on the ichthyofauna of


Easa and Shaji (1996) studied the freshwater fishes of Pamba River in Chinnar wildlife sanctuary. Arun et al. (1996) recorded new fishes from Periyar tiger reserve. Biju et al. (1998, 1999a, 1999b) conducted studies in Uppala river, Parambikulam wildlife sanctuary and Manjeswaram river. A comprehensive list of 64 ornamental fishes endemic to Peninsular India with special regards to Western Ghats was prepared by NBFGR (Gopalakrishnan and Ponniah, 1998). Later it was modified by Rajesh Dayal and Kapoor (1998). They surveyed the existing database for potential ornamental fishes of Peninsular India. AjithKumar et al. (1999) documented the fish fauna and their distribution in Chalakkudy river system. Jayaram (1999) studied extensively on the freshwater fishes of India.

Certain aspects of Ecology of Ithikkara river was studied by Sheeba (1999). Shaji and Easa (1999) reported the fish fauna of Chalakkudy River.
Minimol (2000) studied the fish fauna and fishery management of Periyar Lake. Thomas et al. (2000) documented the fish fauna of Neyyar wildlife sanctuary. Extensive studies were carried out by AnnaMercy et al. (2001) on riverine and reservoir fisheries of India. Ajith kumar et al. (2001) surveyed the fishes of Puyamkutty River and collected about 34 species of fishes. Fresh water fishes of southern Kerala was reported by Thomas et al (2002).


Sehgal (2003) studied the coldwater fish and fisheries in the Western Ghats. Sandhya (2003) documented the fish assemblages and their dynamics in Vellayani Lake. Kurup et al. (2004) extensively analyzed the biodiversity status of fishes inhabiting rivers of Kerala with special reference to endemism, threats and conservative measures. A commendable project on indigenous ornamental fishes of Western Ghats of India was carried out under the leadership of AnnaMercy (2003). Freshwater fish of Western Ghats were also documented by Dahanukar

Annamercy (2003, 2004) intensively studied the status of captive breeding and propagation of many indigenous fishes of Western Ghats. Annamercy et al. (2007) continued the above work. Another commendable work of fresh water ornamental fishes of Kerala and their potential and captive survival in aquarium was studied by Ramachandran et al. (2005). Girija (2007) documented the resource potential of Sasthamkotta Lake with special reference to fish fauna. Sarkar et al. (2007) have record a detailed attempt towards developing a freshwater aquatic sanctuary. Pramod (2007) documented the ecobiology of Kuttanad with reference to fisheries. A survey on fish diversity of India was made by NBFGR (2007) and reported about 2118 species of fishes inhabit the waters of India. About 154 species from cold water and 433 from warm water and 171 from brackish water was documented by Anna Mercy et al. (2007) as a study on ornamental fishes of Western Ghats of India and Girija kumari et al. (2007) studied the ichthyofaunal diversity of Sasthamkotta Ramsar Lake of Kerala.

Species richness and distribution of fresh water fishes in river Chalakkudy part of Western Ghats was studied by Raghavan et al. (2008 a, b). Fish diversity in Achencoil river of Kerala was documented by Swapna (2009). Johnson and Arunachalam (2009) surveyed the streams of Western Ghats in general and Kalesh et al. (2010) surveyed the Achencoil river part in the Achencoil Reserve forest. Ichthyodiversity of Periyar tiger reserve of Kerala was studied by

**Hydrographical studies** of different water systems have been carried out extensively in different parts of the world. Chemical and biological survey of Nile waters of Illinois have been studied at a very early stage itself by Beam (1906). Other works on this aspect are Edward (1913), Abdin (1948) and Chacko and Ganapathy (1949).

Studies on hydrography of Indian River systems and especially rivers of Kerala have been extensively made by a number of investigators. Hydrobiology of Malampuzha River was reported by Chacko *et al.* (1953). Chakraborty *et al.* (1959), Georgekartha (1963 a, b), Ramamithram and Jayaraman (1963), Lekshminarayana (1965), John and Alexander (1968), Kobayashi (1969), Nair (1971), Strickland and Parsons (1972), Dehadrai and Tripathi (1976) and John (1976) also made extensive studies in the hydrobiology of water bodies.

Limnology of a small Malaysian river has been studied by Bishop (1973). Methods of Physical and chemical analysis of freshwater was done by Golterman *et al.* (1978). Gatz (1979) studied extensively on the ecological morphology of freshwater fishes. Sharma (1979) analysed the peculiarities of Bhagirathi River at Tehri.


Hydrographical studies were made recently in Kerala which includes the work of Shirly (1993), Jerro (1994) and Abbasi et al. (1998). Environmental assessment of water and soil and air was explained by Gupta (2001). Water quality management in aquarium systems was a commendable work by Ramachandran (2002b). Cold water fisheries in the Western Ghats have been extensively studied by Sehgal (2003). Chemo dynamics and eco hydrology of a tropical estuary was made by Renjith (2006). Impact of Peringattukurissiy check dam on the hydrography of Bharatapuzha was reported by Biju and Kurien (2009).

Seasonal changes in physico chemical parameters and its influence in the microbial population of Periyar River at Neriamangalam was studied by Sureshkumar et al. (2010). Sanalkumar et al. (2013) also made an attempt to study the ichthyofaunal diversity of River Achencoil in relation to water and physico chemical characters.

From the part of the river Achencoil, flowing through Pathanamthitta district, Jero (1994) identified 58 species of fishes. The fresh water fish diversity of Western Ghats was extensively studied by Shaji et al., (2000). Extensive studies on freshwater ornamental fish resources of Kerala and their conservation was made by Ramachandran et al., (2001). The fresh water ornamental fish fauna of Kerala is biologically more diverse, represented by about 125 species, majority of them suitable for keeping in home aquariums due to their gorgeous coloration and hardy nature. Studies on Indian Tiger barb, *Puntius filamentosus* and Malini’s barb, *Puntius mahecola* and their prospects as ornamental fishes were carried out by Pramod et al., (2002).

Survey of potential ornamental fishes of peninsular India was initiated by Rajesh and Kapoor (1998). According to Anna Mercy (2003), of the 292 species recorded from the rivers of Kerala, 155 have ornamental value and are endemic to the Western Ghats. Kurup et al. (2004), who have collected 175 species of fishes under 13 orders, 29 families and 65 genera from the rivers and streams of Kerala, recognized 109 species as having ornamental value. Biodiversity studies showed that the Western Ghats is a gold mine for ornamental fishes. Of the 300 fishes assessed so far from the rivers of Kerala, 155 have ornamental value and many of them are endemic to Western Ghats. Another commendable and extensive study of freshwater ornamental fishes of Kerala and their captive survival as ornamental fishes was reported by Ramachandran et al. (2005). Anna Mercy et al. (2007) reported that in the rivers originating from the Western Ghats, there are 187 species of ornamental fishes (including the 109 reported by Kurup et al. (2004) under 14 orders, 39 families and 81 genera. Diversity and assemblage of fishes in
streams of southern Western Ghats were also reported by Johnson and Arunachalam (2009).

Swapna (2007) identified 53 species of fishes from river Achencoil. Ichthyofaunal diversity of the river was also studied by Santhy et al. (2010) and Hosagouder et al. (2010). Kalesh et al. (2010) and Fibin et al. (2011) have reported on the faunal diversity of the Achencoil Reserve Forest. As it is clear from their reports, the main focus of their work was on the taxonomy and diversity of the fish community of the river, there being no special emphasis on the ornamental species. Recently, Sanalkumar et al. (2013) attempted to analyse the biodiversity pattern of the ornamental fish community of the river Achencoil based on conventional structural indices of diversity.

**Feeding Biology studies of fishes** have been investigated elaborately from different points of view by many workers from very early period itself (Pearse, 1915). Studies on the digestive system of a minnow, *Campostoma anomalum* was an early study in this aspect by Rogick (1931) and *Prionote cariolinus* by Blake (1936). Fraser (1937) also contributed on the biological aspect of fishes. The histology of the digestive tract of *Saccobranchus fossilis* and *Macrones vittatus* by Vanajakshi (1938) was another study. The alimentary canal of *Labeo rohita* was documented by Sarbahi (1939). Suyehiro (1942) studied the digestive system and feeding habits of fishes.

The feeding habit of teleosts living in the neighbourhood of the biological station of Ghardaque was made by Al-Hussaini (1946, 1947 a, b). Hynes (1950) have studied the food and feeding habits of freshwater Sicklebacks. Pillai (1952)
documented the methods of study of food of fishes. The feeding mechanism of *Labeo horie* was analyzed by Gergis (1952). Das and Moitra (1956) made a comparative study on the anatomy of alimentary tract of common fishes of Uttar Pradesh.


A study on gut length in relation to feeding habits of five commercially important fishes from Assam was carried out by Biswas (1985). Food and feeding habits of two cyprinid forage fishes, *Puntius filamentosus* and *Puntius amphibius* from South Kerala was studied by Premkumar *et al.* (1986). Biology of the arid cat fish of southwest coast of India has been extensively studied by Usha (1989). Effect of different diets on the growth of larva of *Trichogaster trichopterus* was reported by Degani (1990). Studies on the culture of the pearl spot, *Etroplus suratensis* was carried out by Marie (1991). Certain species of Rasborinae were reported by Remadevi and Menon (1992). Shirly (1993) studied on the biology of *Pristolepis malabaricus*. Khan and Abidi (1994) during their studies reported that Indian trout *Raiamas bola*, an endangered species that need protection. Kestemont (1995) reported the influence of feed supply on the growth of larvae of gold
fiches. Mini (1996) made a detailed attempt to study *Puntius amphibius* of Pamba river system.

A comparative study on two ornamental fishes, the blue gourami and pearl gourami was carried out by Mayadevi (1997). Neelakanteswar (1997) studied the effect of different diets on the growth of Angel fishes. Freeman *et al.* (1997) made an attempt to study the transferability of habitat suitability criteria for fishes in warm water streams. Somashekharan (1998) reported the Anchcovies of Kerala. Extensive studies on cyprinids have been done by Cech and Moyle (2000). Cultivable, ornamental, sport and food fishes endemic to Peninsular India with special reference to Western Ghats were extensively studied by Gopalakrishnan and Ponniah (2000 a, b). Kharbuly *et al.* (2004) made a relevant study on reproductive Biology of *Danio aequipinnatus*.

**SIGNIFICANCE OF THE STUDY**

Fundamental knowledge on the biology of aquarium fishes is of utmost importance, not only to fill up the lacuna of our present day academic knowledge, but also increasing the technological efficiencies of the fish keeping entrepreneurs, for evolving judicious pisciculture management in aquaria.

A well maintained aquarium is not only a site of beauty; in fact it can be said as one of the smallest ecosystem which represents the natural beauty of our environment. Commercially culturing of ornamental fishes has gained great importance. The common fishes which are cultured for ornamental purpose are the different species of gouramies, guppies, goldfishes, angel fishes etc. Their
biology, reproductive behavior and dietary requirements have extensively been studied (Mayadevi, 1997; Fernando et al., 1985). Most of these fishes have high economic value and hence not affordable by common man. For this purpose, we must be aware of the biology of the fishes.

Detailed attempts to study the indigenous fishes of our rivers have been done by Anna mercy et al., (2003a) and Ramachandran et al. (2005). Despite being blessed with rich resources of abundant water and all essential parameters for breeding and rearing of tropical freshwater ornamental fishes, India has failed to get a foothold in market for exports. However the growth of ornamental fish trade in India is very much encouraging. Though our country has rich and unique biodiversity with a variety of indigenous ornamental fishes, this has not been properly exploited (Rajeev et al., 2007).

Our state, Kerala also has rich resources of indigenous ornamental fishes in various river systems that have the potential to earn income to the state. Out of 44 rivers of Kerala many of them have been surveyed by Ramachandran (2002c), Anna Mercy et al. (2003a) and Ramachandran et al. (2005) and Annamercy and Eapen(2007). Anna Mercy and co workers were able to develop captive rearing technology of 71 species of the ornamental fishes from rivers originating from Western Ghats (AnnaMercy, 2003 and AnnaMercy et al., 2003b). About 142 indigenous species of fishes have been reported and out of which 72 were considered to be possible ornamental fishes (Rajeev et al., 2008). The highly endemic stream fishes of Kerala part of the Western Ghats are now an important component of the global ornamental fish trade (Rajeev et al., 2007).
River Achencoil is comparatively less polluted river that has yet to be explored and studied in detail for ornamental fishes. Here lies the relevance of the present study which is an attempt to explore the fish diversity potential within Achencoil River, especially for ornamental purposes.

Jerro (1994) have made a detailed study of fish assemblages of Achencoil River. Swapna (2007) identified 53 species of fishes. Ichthyofaunal diversity of the river was also studied by Santhy et al. (2010). Kalesh et al. (2010) and Fibin et al. (2011) have reported on the faunal diversity of the Achencoil Reserve Forest. But the ornamental fishery potential is yet to be discussed. Therefore the present study is taken up with a view for appending relevant information to the existing knowledge on the distribution of indigenous ornamental fishes and their biology and maintenance under captive condition.

Literature survey reveals that very few studies have been undertaken on different aspects of the important water bodies of the state. Due to extensive human interventions, many of the glorious rivers have become critically endangered, undergoing severe degradation. Over exploitation and alternate use of water has affected the fish fauna of the river Achencoil, leading to serious ecological concern. Consistent changes occurring in the aquatic heritage of the river due to environmental modification and increased demand for fish food, is keeping the river under constant pressure. Another hazard the river face now is indiscriminate sand mining and extraction of flood plain clay for building and construction activities. Thus it can be concluded that the river system is under the verge of severe deterioration. Proper planning and organized studies are needed to
tackle this severe situation. Except for a few scattered reports, there are no scientific records on the aquatic ecology and biodiversity of ornamentals of River Achencoil. This paucity of information had made to undertake the present work.

Studies on the indigenous ornamental fishes have gained considerable importance today. Adorned with colorful bands, blotches, spots and colorations of fin and body, the indigenous fishes of Kerala have started creating a niche of its own in the ornamental fish marketing scenario. Recent studies in the state of Kerala also show great potential for exploring the possibilities of marketing indigenous species to overseas market (Ramachandran, 2001). If we use the available natural resources judiciously, with great care for conservation and proper management, our country can easily penetrate into various international markets.