

Nekton, benthos, Temporary and head water streams, general ecological succession

Nekton, benthos, Temporary and head water streams, general ecological succession

Nekton – benthos characteristics

Since streams are shallow water bodies and hence they do not support organisms inhabiting at the bottom but very rarely the deep waters of rivers support such organisms. In most of the streams a sharp dividing line between nekton and benthos on natural basis does not exist. Of the vast communities of organisms involved, fishes are the only group which might be called nektonic. The benthos and nekton have been jointly grouped to have abundant quantities in shallow moving water bodies.

Temporary and head water streams

During dry seasons, the channels are either completely devoid of water or at most contain few isolated pools. Such water may not support life but really and especially during certain season certain assemblages of organisms are present which possess the following features :

1. Life histories requiring water only in a portion of the cycle and therefore such streams do not support aquatic residents.
2. No development of higher aquatic plants but few plant eaters available among the fauna.
3. Very rarely found carnivorous who feed upon detritus and microorganisms.
4. Positive rheotropism in some of the motile forms: cling or attach to the substrates.
5. Some of the tolerant species may carry over in pools from one flowing water system to the other.
6. Linear sequence distribution of fishes. With the onset of drought, some fishes move downstream, with rise of water level, they move towards upstream but maintaining their general distribution.
7. Aquatic insects form the most diversified group of the fauna

The two large types of stream communities are a) those characteristics of swift waters with hard, stable bottom and b) those characteristics of slow moving waters with soft, unstable bottoms. In swift water type, there is no pelagic community. The sluggish water type depends upon soft bottom and slow current, decaying organic matter, accumulated on bottom, support large quantities of bacteria, motile pelagic communities and remain in no fixed position in relation to bottom.

General ecological succession

It is a known physiographic fact that the head water region of running water unit / system will migrate. Streams for example extend their growth and

proceeds by continually cutting back at their back (source). As the time goes on, the young stream condition migrate upstream with the migration of head waters and older set of environmental conditions move upstream to occupy the level occupied by young stream environment.

The migration of stream dependent largely upon the rate of erosion and transportation of materials at the source and is a slow process. An interesting development in the subject of succession of stream communities as pointed out by Shelford and Eddy (1929) that permanent stream communities exist, undergo successional development, reach and maintain a quasi-stable condition and manifest seasonal and annual differences as do terrestrial and marine communities.