

In some taxa, there are transitional segments that have capillary setae in the notopodia and hooded hooks in the neuropodia, or setigers with mixed fascicles of both capillary setae and hooded hooks. In a few cases, a change in body appearance occurs on a different segment than a change in setae. In these cases, the definition of the thorax has depended on the interpretation by the author, and there are differences in how different authors have interpreted these changes in appearance.

Without reference to internal anatomy, descriptions of the thorax/abdomen junction will continue to be problematic, particularly for species that lack correspondence of an obvious change in body appearance with a change in setae. Characters that may vary between the "thorax" and "abdomen" include setae type and appearance, position of setae within a segment (e.g., more central in thorax, more posterior in abdomen), development of parapodia, location of genital pores, and methyl green staining patterns. None of these characters are foolproof, and must be considered in combination.

Lateral organs: Many species descriptions lack reference to the lateral organs or indicate that they were not observed. Lateral organs occur in the interramal space between the noto- and neuropodia, closer to the notopodia, on most segments. They do not occur on the peristomium. In specimens with an uniramous first setiger, they occur ventral to the notopodia in line with the lateral organs on subsequent setigers. In species with an aseptuous post-peristomial segment (e.g., *Scyphoproctus*), they occur in the same position on that segment as they do on subsequent setigers. In some genera they are obvious in both the thorax and abdomen, in others they are apparent only on the thorax. In small specimens (including some genera), they are not detectable at all.

Lateral organs typically are flush with the body wall, but may protrude from the abdomen in some species. Some descriptions have erroneously referred to protruded abdominal lateral organs as branchial vesicles.

Methyl green stain is useful for distinguishing lateral organs either because they do not stain or they stain a lighter color than the surrounding segment. Methyl green stain is not an aid for identifying lateral organs on the abdomen when there is no uptake of stain in that part of the body.

Intersegmental genital pores. Paired pores may occur between the segment boundaries of several setigers in the thorax and/or abdomen. The pores occur nearly in line, but slightly ventral and posterior to the lateral organs. These pores were referred to as genital pores by Eisig (1887), genital or nephridiopores by Hartman (1947), and have been variously referred to by these terms by subsequent authors. These pores may not be detectable on all specimens of a species, even those of the same size and in the same collection. It has been hypothesized by others that they become apparent in sexually mature individuals. Limited dissections examining the relationship between the pores and nephridia have only been presented by Eisig (1887).

The term genital pore is preferred by this author to avoid confusion with nephridia, which may occur in more segments than indicated by genital pores. For example, Eisig (1887)