

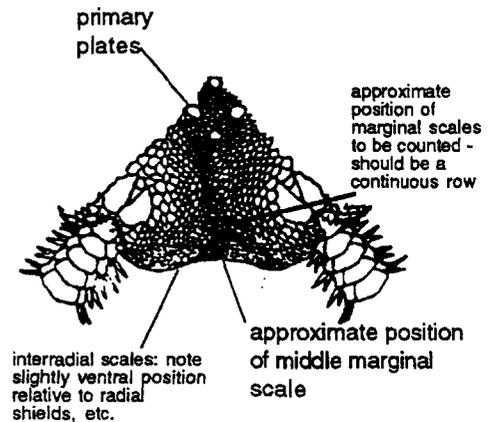
Distinguishing among *Amphiodia urtica*, *Amphiodia digitata* and *Amphiodia* sp.

A: Ophiroids 2/A *urtica* vs *A. digitata* vs *A. sp.*
D. Pasko 8/94

Amphiodia urtica:

Specimens greater than 2mm in diameter can usually be distinguished from *Amphiodia digitata* by the **absence of a single row** of hyaline forks along the entire disc margin, and by the more numerous marginal disc scales (see chart below). The following characters can be used to speciate all *A. urtica*.

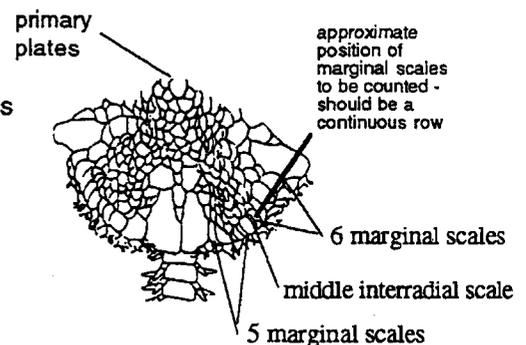
- 1) hyaline forks small and generally restricted to area near radial shields, though they may extend to interradial scales and genital slits (= ventral side of disc cap near arms where eggs occur);
- 2) from 4-10 marginal scales on either side of middle marginal scale depending on disc diameter and whether disc is regenerating or not. (Note that number may not be the same on both sides);
- 3) marginal scales notably decrease in size from radial shields to middle marginal scale, making the most medial scales difficult to distinguish (compare figure at right with *A. digitata* below);
- 4) disc scales small $\leq 1/3-1/2$ of primary plates.



Amphiodia digitata:

When the discs are not regenerating, specimens can be easily recognized by a **single row** of large hyaline forks along the margin, the row of large marginal scales, and the larger disc scales. Even specimens ± 3 mm will have well developed hyaline forks. Specimens with regenerating discs may not have developed any marginal forks, but can still be identified by the larger (and consequently fewer) marginal scales (see chart below).

- 1) hyaline forks large, clearly forked, restricted to **one row** of marginal scales - none interradially;
- 2) from 3-6 sub-equal marginal scales on either side of middle interradial scale depending on disc diameter and whether disc is original or regenerating;
- 3) marginal scales subequal in size from radial shield to middle interradial scale;
- 4) disc scales large, $\sim 1/2-2/3$ of primary plates.



Amphiodia sp.:

Specimens placed in "*Amphiodia* sp." should have 3 oral papillae, be either very small (≤ 2 mm disc diameter), regenerating their disc cap, or have poorly developed marginal scales such that the characters listed above are indeterminable. Consider the following four criteria before designating specimens as "*Amphiodia* sp." **Do not use size alone!**

- 1) spm. very small (disc ≤ 2 mm);
- 2) disc cap consists of primary plates and few other scales;
- 3) hyaline forks absent and marginal disc scales are not produced;
- 4) number of marginal scales ≤ 2 on either side of middle marginal scale, or number indeterminable;

Disc diam. (mm)	# of marginal scales	
	<i>A. urtica</i>	<i>A. digitata</i>
5	7 to 9	5
4	6 to 10 (8)	3 to 4
3	5 to 8 (6)	3 to 5 (3,4)
2	4 to 5	3

Distinguishing among *Amphiodia urtica*, *Amphiodia digitata*, and *Amphiodia* sp. - revisited.

Most of the time "adult" *A. urtica* can be easily distinguished from *Amphiodia digitata* by the row of hyaline forks along the margin of the disc cap, the size of the disc scales, and the number of marginal scales (see attached comparison page). However, in small specimens and specimens with regenerating discs, these characters may be absent or difficult to distinguish. It is these small and regenerating specimens that have too commonly been classified as "*Amphiodia* sp." Many of these specimens should probably be counted as *A. urtica*. In the accompanying comparison page I list the various characters that most reliably differentiate the two species. Even specimens as small as 2 - 3mm in diameter can usually be distinguished as either *A. urtica* or *A. digitata*. In addition to the presence/absence of a single row of hyaline forks along the entire disc margin, the number of marginal disc scales is a good character to separate the two species (see chart below).

Here are two commonly encountered forms of *A. urtica* that have resulted in high numbers of "*Amphiodia* sp." recordings:

- 1) Occasionally, *A. urtica* will have multiple rows of interradial scales (scales between the arms) with hyaline forks. This is especially common in animals with regenerating discs. Specimens with this character can be classified as *A. urtica*.
- 2) In small specimens (± 3 mm), particularly those with regenerating discs, the hyaline forks may be poorly developed or absent altogether. Most of these specimens can probably be classified as *A. urtica* based on the number of marginal disc scales (see chart below).

The chart below lists the range and median number of marginal scales occurring on either side of the middle marginal scale relative to the disc diameter (see comparison page). Note that there is actually very little overlap in the ranges and that the median value is generally quite distinct.

(#) = median