The podobranchial plume is absent from all the appendages except the first pair of gnathopoda (*h*), where it is short but well formed, and attached to the base of a small but efficient mastigobranchia that equals the podobranchial plume in length, and lies between and separates the plumes of the first from those of the second pair of gnathopoda.

Beneath the podobranchia lies one rather small and slender arthrobranchial plume, which, from its position, I consider to be the posterior. But the examination of two specimens, one from Bermuda, and the other from the Fiji Islands, has failed to show the second or anterior arthrobranchia attached to this articulation, or a pleurobranchia either.

The second pair of gnathopoda (*i*) has a small mastigobranchia, no podobranchia, two well-formed arthrobranchiæ, and a small pleurobranchia (omitted in the plate).

The pereiopoda are similar in arrangement, but increase in strength and development posteriorly, both as regards the mastigobranchial plates and the branchial plumes, until the fifth or posterior pair of pereiopoda, where, as is common in the Macrura, the pleurobranchia alone is present, and is more largely developed than any of the anterior plumes.

The branchial arangement may be thus tabulated—

Pleurobranchiæ,	.	.	.	...	1	1	1	1	1	1
Arthrobranchiæ,	.	.	.	1	2	2	2	2	2	...
Podobranchiæ,	.	.	.	1	...	...	...	...	...	...
Mastigobranchiæ,	.	.	.	1	1	1	1	1	1	1
				h	i	k	l	m	n	o

Thus there are six pleurobranchiæ, eleven arthrobranchiæ (five anterior, six posterior), one podobranchia, and six mastigobranchiæ, of which the first though small is the only efficient appendage, the others being more or less rudimentary, but increasing in importance posterior to the first pair of pereiopoda.

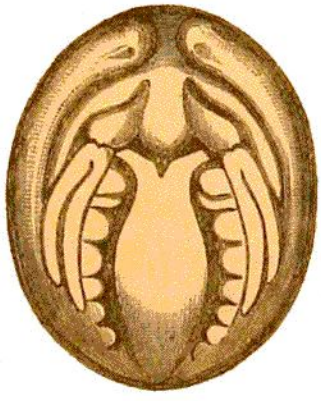

FIG. 40.—Embryo of *Stenopus hispidus*, as seen in the ovum.

Close observation of the specimens from the Eastern and Western Hemispheres has failed to show the slightest variation, except in the curvature of the posterior pair of pereiopoda, which, in the Bermudan specimen, from which our figure is taken, has the meros bent and the carpos, so far as preserved, not multiarticulate, features which I attribute to some accident to the appendage during development.

The ova are small in size, being only 0·5 mm. in diameter, and enormous in number. An examination of the immature embryo shows there is reason to believe, from the advanced stage in which it appears, that the brephalos may quit the ovum in the Megalopa stage, which circumstance, although it does not coincide with the form of the brephalos