

p. 118), remarks on the great mobility of the tail, which may possibly have suggested a comparison with the tail of a Lizard to the older naturalists. They appear never to swim actively about, but merely to float on the surface of the sea with the foot uppermost, the papillæ serving as "balancers."<sup>1</sup> According to Bory de St. Vincent and Forster<sup>2</sup> this position is sometimes reversed, but Reinhardt did not observe this. These animals take in and expel air through the mouth (Forster, Bennett, Reinhardt), and Reinhardt<sup>3</sup> states that immediately after the expulsion of air-bubbles, a bluish fluid, not readily soluble in sea water, is evacuated. This fact is also noticed by Forster<sup>4</sup> and Bennett;<sup>5</sup> the latter, however, describes the fluid as brownish in colour, and regards it as being of a fœcal nature. In the specimens of *Glaucus* which I examined, there was nearly always a quantity of air in the stomach, which was readily expelled from the mouth, together with a violet-coloured liquid, on applying a slight pressure to the back of the animal. The contractility of the body and its appendages is very great, and accounts for the differences that exist in the figures given by various authors. The papillæ of the body are readily detached, as in many other *Æolidiadae*. According to Forster,<sup>6</sup> this is also the case with the tail; I very rarely saw an individual, however, that was without a tail.

According to Vayssière, *Glaucus* is phosphorescent. Its food appears to consist chiefly of *Verella* and *Porpita*.<sup>7</sup> Quoy and Gaimard<sup>8</sup> were the first to give a description of the spawn of *Glaucus*; it has since been figured and described by Souleyet,<sup>9</sup> and by myself.<sup>10</sup> D'Orbigny<sup>11</sup> states that the spawn is deposited upon the disc of *Verella*. Copulation has been observed and described by d'Orbigny and Lesson,<sup>12</sup> and I have myself<sup>13</sup> noticed individuals which appeared to be in the act of copulation. The development is up to the present quite unknown.

When preserved in alcohol, these animals become very much altered in shape, and for this reason very different accounts have been given of the number of species which exist. Most observers who have seen the living animals, distinguish several species (Rang 2, Eschscholtz and Reinhardt 4, Lesson 6); those, on the other hand, who have

<sup>1</sup> The assertions of some naturalists that *Glaucus* is able to swim by means of the "gills" were denied by Chamisso and Eisenhardt (*Nov. Act. Nat. Cur.*, X., 1821, p. 347), as well as by Eschscholtz (*Zool. Atl.*, Heft 4, 1831, p. 16). The statement of the last-mentioned author that the animal swims by means of air-bubbles under the "ventral disc" (*loc. cit.* and *Isis*, 1825, I. col. 737) means really that it is kept floating at the surface of the water by help of the swallowed air. A. Adams (*Ann. and Mag. Nat. Hist.*, ser. 2, vol. xix., 1857, p. 402) appears to have noticed this habit of swallowing air, and Forster many years ago (Voigt, *Magazin*, *loc. cit.*, p. 361) saw the expulsion of air-bubbles through the mouth ("per os spirant").

<sup>2</sup> Voy. de la Coquille, t. ii. p. 284. Voy. aux quatre îles d'Afrique, I., p. 136, pl. vi. fig. 1, A.B. Voigt, *Magazin*, &c., *loc. cit.*, p. 341.

<sup>3</sup> Bergh, *loc. cit.*, p. 250.

<sup>4</sup> Voigt, *Magazin*, &c., Bd. v., 1803, p. 341.

<sup>5</sup> *Loc. cit.*, p. 115.

<sup>6</sup> Voigt, *Magazin*, &c., p. 341.

<sup>7</sup> Bennett, *loc. cit.*, pp. 113-119; Bergh, *loc. cit.*, p. 251.

<sup>8</sup> *Loc. cit.*, p. 279.

<sup>9</sup> Voyage de la Bonite, p. 442, pl. xxiv. fig. 25.

<sup>10</sup> Bergh, *loc. cit.*, pp. 281, 291, 293, 298, 302, Taf. vii. fig. 18. In Gray's *Figures of Molluscous Animals* (vol. iii. pl. cci. fig. 6a) the spawn is not well represented (after a drawing of Hooker l).

<sup>11</sup> Voy. aux îles Canaries, p. 42.

<sup>12</sup> *Loc. cit.*, pp. 280, 287.

<sup>13</sup> Bergh, *loc. cit.*, p. 282, Taf. vii. fig. 14.