

not very minute. The central line or raphe is throughout the greater part of its course straight but curves near the extremities of the valve, so that the surface of the latter is divided into two equal parts while the raphe runs obliquely across it.

The *Pleurosigma speciosum* of W. Smith¹ agrees with the present form in every respect except with regard to the profile of the valve, which, instead of being linear, is in the former linear-lanceolate. Hence the Tahitian frustule has been regarded as a variety of Smith's species.

Pleurosigma arafurens, n. sp. (Plate XXVIII. fig. 5.)

E minimis, lanceolata, vix sigmoidea; apicibus obtusis; linea media excentrica; nodulo centrali grandiusculo, quadrato; striis decussatis tenuissimis. In mari Arafura.

This very minute species, from the Arafura Sea, is provided with excessively delicate striæ. It is remarkable on account of the size and subquadrate form of the central nodule as well as the very slight sigmoid curve of the profile of the valve. The median raphe is central and the extremities are obtusely rounded.

The specific name has reference to the locality from which it has first been recorded.

Pleurosigma thaitiense, n. sp. (Plate XXVIII. fig. 4.)

Valvis lanceolatis, gradatim ad apices acuto-rotundatos terminantibus, et moderate curvatis; raphe centrali ad apices submarginali; striis decussatis vix perspicuis. In portu Thaiti.

This very elegant frustule possesses a lanceolate sigmoidal form and acutely rounded extremities. The flexion is moderate, and the central raphe becomes decidedly excentric towards the ends. The granulation is very delicate and decussate.

Pleurosigma smithianum, n. sp. (Plate XXVIII. fig. 6.)

Valvis lanceolatis, acutis, aduncis; raphe sigmoideo, ad centrum oblique transverso, dein submarginali. Ad portum Thaiti.

In the collection which contained *Pleurosigma thaitiense*, n. sp., from the port of Tahiti, the present frustule was often observed. The disposition of the raphe is particularly noteworthy, remaining submarginal at the two extremities, then closely following the outline of the valve, and finally abruptly crossing it near the centre in an elegant curve. The extremities of the valve are acute and somewhat hooked. This form is extremely characteristic and very easy to determine.

Pleurosigma japonicum, n. sp. (Plate XXIX. fig. 14.)

Minimum, sigmoideo-lanceolatum; linea media apices cuneato-obtusos inæqualiter dividente; grandiusculorum punctulorum lineis decussatis. Ad mare Japonicum.

¹ W. Smith, *op. cit.*, vol. i. p. 63, pl. xx. fig. 197.