

DIPLOSOMA MACDONALD, 1859 (ASCIDEACEA): PROPOSED
VALIDATION UNDER THE PLENARY POWERS. Z.N.(S.) 1766

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Milne Edwards (1841) introduced the generic name *Leptoclinum* for six new species, *maculosum*, *asperum*, *durum*, *fulgens*, *gelatinosum* and *listerianum*. The last of these was unseen by Milne Edwards, being based on an earlier description of an unnamed ascidian by Lister (1834).

Hartmeyer (1909a), agreeing with Della Valle (1908), declared that *Leptoclinum* Milne Edwards was insufficiently characterized as a genus. However he considered that of the six individual nominal species, which were still recognizable from their figures alone, *L. maculosum*, *asperum*, *durum* and *fulgens* were referable to the genus *Didemnum* Savigny, 1816 (type-species *D. candidum* Savigny, 1816), thus restricting the type-species of *Leptoclinum* to either *L. gelatinosum* or *listerianum*. *L. gelatinosum* had been considered by Lahille (1890) to be conspecific with (or certainly not more than subspecifically distinct from) *listerianum*. He abbreviated the name *listerianum* to *listeri*. By elimination therefore, and as Milne Edwards himself did not designate a type-species for his genus, Hartmeyer (1909) concluded that *listerianum* becomes the type-species of *Leptoclinum* Milne Edwards. It should be noted that the name *gelatinosum* has page priority over *listerianum* which presumably prompted Harant (1933) to retain the specific name *gelatinosum* and treat *listerianum* as a variety of it. However a search of the literature shows that an incidence ratio of *listerianum* : *gelatinosum* is 2 : 1. Hartmeyer (1909) further had no doubt that, as Lahille (1890) had shown, *gelatinosum* and *listerianum* are congeneric with *Diplosoma rayneri* Macdonald (1859), the type-species of *Diplosoma* Macdonald, 1859. I consider that he was right therefore to make *Diplosoma* a synonym of *Leptoclinum* Milne Edwards. Lahille (1890) had already treated *D. rayneri* as a synonym of *D. listerianum*.

In 1915 Hartmeyer ignored the law of priority and reversed this generic synonymy on the grounds that *Diplosoma* was more widely used. Simultaneously he designated *Leptoclinum listerianum* Milne Edwards as the type-species of *Diplosoma* Macdonald for the same reason. In the same year Apstein (apparently after prior consultation with Hartmeyer) listed *Diplosoma* as a valid generic name with *listerianum* Milne Edwards designated as a type-species.

2. A search through published works, both prior and subsequent to Hartmeyer 1909 and 1915, shows a divided usage of generic name but *Diplosoma* Macdonald rather than *Leptoclinum* Milne Edwards is favoured quantitatively by a 2.5 : 1 ratio. *Diplosoma* has been used by:

Apstein (1915)	Herdman (1886–1906)
Brewin (1946–1960)	Lahille (1890)
Carlisle (1953–1961)	Millar (1949–1963)
Caullery (1895)	Oka (1892)

Della Valle (1881–1908)	Parenzan (1960)
Von Drasche (1883)	Pérès (1945–1962)
Goodbody (1961–1962)	Pizon (1905–1906)
Gottschaldt (1898)	Salensky (1894)
Harant (1927–1933)	Thompson (1934)
Hastings (1930)	

Leptoclinum has been used (in the *Diplosoma* sense) by:

Alder and Hancock (1912)	Milne Edwards (1841)
Capocaccia (1964)	Ritter and Forsyth (1917)
Forbes (1848)	Salfi (1932–1946)
Huntsman (1912)	Tokioka (1942–1963)

Divided use of the two generic names by:

	<i>Diplosoma</i>	<i>Leptoclinum</i>
Berrill	1928, 1935, 1936, 1950	1932 only
Hartmeyer	1906, 1915, 1919, 1922, 1924	1909, 1912, 1914, 1915
Huus	1927	1937, 1950
Kott	1952, 1957	1962
Michaelsen	1919, 1920, 1923, 1930	1915 only
Sluiter	1898, 1906, 1927, 1929, 1932	1909, 1912, 1914
Van Name	1902, 1945	1918, 1921

From the above tables it can be clearly seen that the name *Diplosoma* has been, and still is, more popularly accepted than *Leptoclinum*. Of the authors who have divided their usage of the two generic names, Michaelsen and Sluiter merely followed Hartmeyer, as prior to 1909 and subsequent to 1915 all three authors adopted the name *Diplosoma*. Berrill used *Leptoclinum* only in 1932 when he referred to *L. macdonaldi* (Herdman) from the Bermudas. Kott and Huus though they used the name *Diplosoma* in their earlier papers on ascidians have since changed to *Leptoclinum*. In 1902 Van Name described two new species of *Diplosoma* (*atropunctata* and *lacteum*) but in 1918 and 1921 he referred both these species and also *D. macdonaldi* to *Leptoclinum*. However, in 1945 he reverted to the use of *Diplosoma* saying that this is a "*Nomen conservandum* antedated by *Leptoclinum* Milne Edwards, 1841, which name has, however, been more often applied to the genus *Didemnum* in this present work."

3. Several workers including Sluiter, Herdman and Hartmeyer have referred species to *Leptoclinum* which should more properly have been included in the genus *Didemnum* Savigny, thus confusing the generic limits of *Leptoclinum*.

4. The number of nominal species which have been referred primarily to *Diplosoma* Macdonald is sixteen. These are:

D. rayneri Macdonald (1859), *D. carnosum* and *chamaeleon* von Drasche (1883), *D. macdonaldi* Herdman (1886), *D. koehleri* Lahille (1890), *D. mitsukurii* Oka (1892), *D. globulare*, *molle*, *circumscriptum* and *ternatum* Gottschaldt (1898), *D. atropunctatum* and *lacteum* Van Name (1902), *D. viride* Herdman (1906), *D. modestum* Michaelsen (1920). *D. pseudoleptoclinum* von Drasche (1883) is currently referred to *Lissoclinum* and *D. purpurea* Sluiter (1898) I consider to be a synonym of *Cystodytes dellechiaiei* (Della Valle, 1877).

Similarly nineteen nominal species have been referred to *Leptoclinum* (in the *Diplosoma* sense). These are:

L. gelatinosum and *listerianum* Milne Edwards (1841), *L. punctatum* Forbes (1848), *L. perspicuum* Sluiter (1909) [Hartmeyer (1909) replaced this name with *L. translucidum*, presumably because Giard (1873) had already used *perspicuum* for a new species of *Leptoclinum* which Hartmeyer referred to the genus *Didemnum* Savigny. As Giard's and Sluiter's species have not been contemporaneously thought to be congeneric, the name *L. perspicuum* Sluiter (1909) is still valid,] *L. varium*, *simile*, *marmoratum*, *papyraceum*, *subviridis* and *multifidum* Sluiter (1909), *L. longinquum* Sluiter (1912), *L. pizoni* Ritter and Forsyth (1917), *L. okai* and *macrolobium* Tokioka (1949), *L. takarai* Tokioka (1951), and *L. midori* Tokioka (1954). *L. calificiforme* Sluiter (1909) is considered to be probably referable to *Coelocormus* by Kott (1962) and she also considers that *L. discrepans* Sluiter (1909) may represent a new genus related to *Trididemnum*.

Although the validity of all these nominal species is not unquestioned, there is no significant argument for retention of *Leptoclinum* Milne Edwards (1841) rather than *Diplosoma* Macdonald (1859) on the basis of the number of species included.

Since the majority of recent publications use the name *Diplosoma*, less confusion would ensue if the International Commission were to suppress *Leptoclinum* Milne Edwards (1841) and validate *Diplosoma* Macdonald (1859) although this does involve a contradiction of priorities.

5. Lahille (1890), the first reviser of *Diplosoma*, gave priority to *listerianum* for the type-species (though terming it *listeri*) over *D. rayneri* (the type-species of *Diplosoma* Macdonald by monotypy) referring *rayneri* to the synonymy of *listerianum* Milne Edwards (Rowe (1966); in press). Also Hartmeyer (1915) designated *L. listerianum* as type-species of *Diplosoma* Macdonald. I think it desirable that this disposition should be followed since the incidence of *rayneri* has been comparatively negligible, being restricted to a few records from Australian seas. Although it seems contradictory to ask for one specific name (*listerianum*) in combination with the opposite generic name (*Diplosoma*), in my opinion this would involve the least confusion, judging from frequency in the literature.

6. In order, therefore, to ensure stability and prevent further confusion the International Commission is asked:

- (1) to use its plenary powers to suppress the generic name *Leptoclinum* Milne Edwards, 1841, for the purposes of the Law of Priority but not for those of the Law of Homonymy;
- (2) to place the generic name *Diplosoma* Macdonald, 1859 (gender: neuter), type-species, by monotypy *Diplosoma rayneri* Macdonald, 1859, on the Official List of Generic Names in Zoology;
- (3) to place the specific name *listerianum* Milne Edwards, 1841, as published in the binomen *Leptoclinum listerianum*, on the Official List of Specific Names in Zoology.

The whereabouts of Lister's type-material of *listerianum* and Macdonald's holotype of *Diplosoma rayneri* are unknown. Also Milne Edwards' specimens, which include the holotypes of *Didemnum gelatinosum* and *L. gelatinosum* cannot now be traced in the Paris Museum. The provenance of the species therefore depends entirely on Lister's description of material from Brighton.

Against the event that the Commission agree on the name *listerianum* as the best one for the species, in a separate paper (Rowe (1966); in press), a description is provided of a specimen from Brighton which could be designated as the neotype of *listerianum*.

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