

菅属 (*Themeda* Forsskal) 及其有关属的分类与考证

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摘要 对菅属 (*Themeda* Forsskal) 的命名与合法性历史进行了考订, 确定合法的属并列出了异名录; 鉴于原 *Anthistiria* Linn. f. 属较庞杂, 属的概念 (范畴) 有较大变化, 本文采用 P. Forsskal 及 E. Hackel 和 W. D. Clayton 的 *Themeda* 属的范畴, 对已发表的原归属于 *Anthistiria* 和 *Themeda* 等属的种 (双名) 逐一作了考订, 以明确它们的隶属关系并转隶于 10 个不同的属; 对 *Themeda* 属自 P. Forsskal (1775) 建立以来的系统分类研究状况作简短的回顾, 并对所存在的问题作了简述。

关键词 菅属; 分类; 禾本科

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A STUDY ON THE SYSTEMATICS OF GENUS *THEMEDA* FORSSKAL

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Abstract This paper is the first part of the study on the system and evolution of genus *Themeda* Forsskal. The nomenclature of *Themeda* Forsskal, *Anthistiria* Linn. f. and relatives were reviewed. The legitimate name *Themeda* published by Peter Forsskal and several synonyms were listed. Genera *Themeda* and *Anthistiria* being examined and corrected were transferred into 10 genera, viz. *Themeda* Forssk. (70 binom. & 33 spp.), *Exothea* Anderss. (1 binom. & 1 sp.), *Hyparrhenia* Anderss, ex Fourn. (13 binom. & 7 spp.), *Iseilema* Anderss. (7 binom. & 3 spp.), *Hyperthelia* W. D. Clayton (1 binom. & 1 sp.), *Germainia* Balans. & Poitr. (2 binom. & 1 sp.), *Pseudanthistiria* (Hack.) Hook. f. (1 binom. & 1 sp.), *Tristachya* Nees (1 binom. & 1 sp.), *Cymbopogon* Spreng (1 binom. & 1 sp.), *Elymandra* Stapf (1 binom. & 1 sp.). Four dubious specific names are presented. Historical study on the systematics of *Themeda* and allied studies were briefly reviewed. The problems of evolutionary trend and systematic treatment have been proposed.

Key words *Themeda* Forssk.; Systematics; Gramineae

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1 属的命名与合法性

Carl von Linné^[1]的学生 Pehr (Peter) Forsskal (1732–1763)^[1]于 1761 年参加丹麦东方探险队前往埃及和阿拉伯半岛进行考察采集, 不幸于 1763 年 7 月 11 日在也门(Yemen)逝世, 英年 32 岁, 留下了一部“Flora Aegyptiaco-Arabica”的手稿。该书在他去世后 12 年于 1775 年 10 月 1 日出版(由 Carsten Niebuhr 编辑)^[2]。他的标本主要存放在哥本哈根大学植物学博物馆标本馆(C)。在他的遗著的第 178 页上发表了新属 *Themeda* 及一个新种: *Themeda triandra*, 此即为本属的模式种, 模式标本由 P. Forsskal 采自也门(无号, 在 C), 后被毁坏而不复存在。然而 *Themeda* Forsskal (1775) 在发表后的一百余年间一直未被人们了解和采用, 广为应用的却是 *Anthistiria* L. f. (1779)。

Anthistiria 属是由 Carl von Linné, filius (1741–1783) 的学生 Daniel Eric Naezen (1752–1808) 在其博士学位论文(在 Uppsala 大学)“Nova Graminum Genera”第 35 页(全文计 37 页及 1 幅图版)中发表的。此文是在 Linn. f. 指导下完成并答辩的, 并于 1779 年 12 月 21 日发表, 但并非 Linn. f. 所撰写。1781 年在 Linn. f. 著的“Supplementum Plantarum”一书的第 13 页, *Anthistiria* 被再次发表(作为 Linn. f. 的属, 引证为“Nov. Gram. Gen. P.35”)。1790 年, 此文(Nov. Gram. Gen.)又以 Linn. f. 的名义再版于 Amoen. Acad. (由 Schreber 编辑) Vol. X (app.), 计 1–40 页。自此开始, 学者们一直将 Linn. f. 作为此文的作者加以引用。如上所述就产生了这样几个问题: 1. *Anthistiria* 属的命名者是谁? 2. “Nov. Gram. Gen.”一文的作者是谁? 3. *Anthistiria* 的模式种是什么? 4. *Anthistiria* 和 *Themeda* 哪一个合法? 笔者将在下文中逐一叙述。

尽管笔者尚未见到“Nov. Gram. Gen.”的原文, 但见到 Linn. f. 1781 年的“Suppl. Pl.”及其后诸多学者的文献, 无疑 *Anthistiria* 的命名者是 Linn. f. 而不是其弟子 D. E. Naezen。

据著名的瑞典植物文献学家 Krok (1834–1921) 考证, 尽管“Nov. Gram. Genera”一文中的分类学观点主要是 Linn. f. 的, 但其本人并未撰写此文, 该文的作者应为 D. E. Naezen。Krok 的观点得到了近年来文献学者的肯定。F. A. Stafleu 和 R. S. Cowan 1981 在“Taxonomic Literature”^[1]上写到, “We follow Krok and accept Naezen as the author of this dissertation.”因此, “Nov. Gram. Genera”一文的作者为 Naezen 而非 Linn. f.; *Anthistiria* 据此应引证为 Linn. f. in D. E. Naezen, Nov. Gram. Genera:35(1779)。

Anthistiria 属最初在 1779 年发表时只有属名与简短的描述而未提及模式种(它的范畴也过于庞杂)。两年以后, Linn. f. 在“Supplementum Plantarum”(1781 年)的第 113 页上发表了种 *Anthistiria ciliata* Linn. f., 这是本属的第 1 个种, 自然也就是属的模式种, [模式标本没有被指定, 可能在 LINN, 笔者未见]。

Anthistiria Linn. f. 这个属名自 1779 年建立起, 一直被广为引用达一百余年, 直到 1889 年奥地利禾草学家 Eduard Hackel (1850–1926) 才发现它与 P. Forsskal 的 *Themeda* 属(1775 年)实为同属, 并为晚出异名。造成这种情况的原因之一是 *Themeda triandra* 的模式标本被毁, 同时 Forsskal 的影响有限; 原因之二是命名法规尚未诞生, …。E. Hackel (1889) 在 de Candolle 父子(A. & C. De Candolle)编辑的“Monographiae Phanerogamarum” Vol. VI.

Andropogoneae 一书中对 *Themeda* 属作了较完整的订正, 而将狭义的 *Anthistiria* 作为晚出异名。但由于 *Anthistiria* 已沿用了一百余年, 特别是瑞典植物学家 Nils Johan Andersson 1856 年对 Anthistiriaceae^[1] 作过完整的修订, *Anthistiria* Linn. f. 在分类学家中影响广泛, 加上期间发表的种名已有几十个之多, 以 J. D. Hooker^[4] 等为首的学者为不造成大的命名变动, 所以 *Themeda* 未被接受而仍然采用 *Anthistiria*, 这种状况一直延续到本世纪初才得以改变。依据现今“法规”的“优先律”原则, 应采用 *Themeda* 为合法属名。

本世纪 80 年代初, 依据“命名法规”23.6(c) 的条款, H. M. Burdet & P. Perret^[5], W. Greuter^[6], I. Friis^[7], C. Jeffrey^[8] 等学者在对“Flora Aegyptiaco-Arabica”的研究中发现, Forsskal 书中的种并非完全一致地采用 Linné 的双名制, 而有多名制等混杂情况, 从而引发 Forsskal 的著作是否符合命名法规, 属合格发表的热烈讨论, 并提出了解决的意见。在新的命名法规上(“东京法规”1994) 的 Art 23.6(c), 已接受 W. Greuter 的建议(1984), 将前一版本(Sydeny 法规, 1991) 中的本条文的第二句删除, 从而使得 Forsskal “Fl. Aegy.-Arab.” 著作中的双名种成为合法; 因而, *Themeda triandra* Forssk. 是合法的。

除上述 *Themeda* 和 *Anthistiria* 外, K. Presl 和 J. Presl 1830 年发表的 *Perobachne* J. & C. Presl; F. W. Junghuhn 1840 年发表的 *Aristaria* Jungh. 和 *Heterelytron* Jungh.^[10] 以及 Brongn 1829 年发表的 *Androscepia* Brongn 等属, 经多数学者研究, 均为 *Themeda* 的异名。现开列如下:

Themeda Forsskal, Fl. Aegypt.-Arab.: 178 (1775).— Type: *T. triandra* Forssk. (1775).

Syn.: *Anthistiria* Linn. f. in D. E. Naezen, Nov. Gram. Gen.: 35 (1779) & Suppl. Pl.: 13, (1781).— Type: *A. ciliata* L. f. (1781).

Perobachne Presl, Rel. Haenk. 1: 348 (1830).— Type: *P. secunda* Presl (1830).

Aristaria Jungh. In Tojtid. Nat. Gesch. 7: 296 (1840).— Type: *A. barbata* (Desf.) Jungh.

Heterelytron Jungh. Ibid. 294.— Type: *H. scabrum* Jungh. (1840).

Androscepia Brongn. In Duperr., Voy. Cog. Bot. Phan. 77 (1829).— Type: *A. gigantea* (Cav.) Brongn. (1829).

2 属的分类及各个种归属的考证

如前所述, 菅属 *Themeda* 虽比 *Anthistiria* 早 4 年发表, 但一直未被采用。而关于 *Anthistiria* Linn. f. 属的分类研究却一直非常活跃, 不仅发表了大量的种(计有 78 个种名), 而且属的概念也有了较大的变化。Linn. f. 的 *Anthistiria* 范畴较大, 以后的学者, 如: N. T. Andersson, W. D. Clayton 等从中分出(成立或归入)数个属; *Exothea* Anderss., *Hyparrhenia* Anderaa. ex Fourn., *Iseilema* Anderss., *Hyperthelia* W. D. Clayton 和 *Elymandra* Stapf 等; *Themeda* 仅相当于狭义的 *Anthistiria*。因此有必要对 *Anthistiria* 及 *Themeda* 属名下的各个种作一个考证, 以明确它们的隶属, 便于进一步的研究。笔者现就目前的认识水平, 暂按 W. D. Clayton (1886) 的观点, 依次对 *Themeda* 和 *Anthistiria* 等名下的种(双名), 逐一考订它们的归属。

2.1 归属于 *Themeda* Forsskal 的计 33 种:

1. *Themeda anathera* (Nees ex Steudel) Hack. in DC., Monogr. Phan. 6:669 (1889).

Based on: *Anthistiria anathera* Nees [ex Royle, III. Bot. Himal. 1:417 (1839), nom. nud.] ex Steudel, syn. Pl. Glum. 1:402 (1855).

Syn: *Andrascepia anathera* (Nees ex Steud.) Anderss. in Nov. Act. Soc. Upsal. ser. 3. (2): 249 (1856), [包括2个变种, var. α *hirsuta* Anderss. 1. c. p. 249; var. β *glabrescens* Anderss. 1. c. p. 249][模式标本采自印度, Wallich. 8773.]

2. *Themeda arguens* (L.) Hack. in DC., Monogr. Phan. 6:657 (1889); Camus (1922)^[28]. Hook. f. (1897)^[4]; S. H. Kooder (1911)^[15]; N. L. Bor (1960)^[33].

Based on: *Stipa arguens* L., Sp. Pl. ed. 2:117 (1762);

Syn.: *Anthistiria arguens* (L.) Willd. Sp. Pl. 4(2): 901 (1806). [模式标本采自印尼的摩鹿加群岛 (Is. Moluccas) (Griff. in H. DC.)].

— *Anthistiria setosa* Thunb. ex Anderss. in Nov. Act. Upsal. ser. III. ii: 233 (1856).

— *Anthistiria arundinacea* Hassk. in Hoev. & De Vriese, Tijeschu. Nat. Gesch. X: 115 (1843) non Roxb. (1820). [模式标本采自爪哇, (L)].

— *Anthistiria frondosa* R. Br., Prod. 1: 200 (1810).

— *Themeda frondosa* (R. Br.) Merrill, Interpr. Rumph. Herb. Amboin.: 89 (1917). [模式标本采自澳大利亚, R. Brown s. n. (BM, K).]

— *Anthistiria junghuhniana* Nees in Jungh., Nova Gen. & Sp. Pl. Fl. Java. 1:(1840); in Steud. Syn. Pl. Glumae. 1: 403 (1854), ex Anderss. in Nov. Act. Soc. Upsal. Ser. 3(2):283 (1856). [模式标本采自爪哇, Nees von Esenbecl s. n. (可能已被破坏而不复存在, 或许可能在CGE, HSG, GE)].

— *Anthistiria pilifera* Steud. Syn. Pl. Gram.: 400 (1854).

3. *Themeda arundinacea* (Roxb) Ridley in Trans. Linn. Soc. Lond. ser. 2(3):401(1893).

Based on: *Anthistiria arundinacea* Roxb., Hort. Beng.: 6 (1814), nomen; Fl. Ind. ed. Carey & Wall. 1: 256 (1820).

Syn.: *Themeda gigantea* (Cav.) Hack. subsp. *arundinacea* (Roxb.) Hack. in DC. Monogr. Phan. 6: 674 (1889).

— *Cymbopogon arundinaceus* (Roxb.) Schult., Syst. Veg. 2, Mant. 457 (1834).

— *Themeda arundinacea* (Roxb.) A. Camus, in H. Lecomte, Fl. Gen. Ind.-Chine 7: 363 (1922). [模式标本采自印度, Roxburgh s. n., 待查.]

4. *Themeda australis* (R. Br.) Stapf in Prain, Fl. Trop. Afr. 9: 420 (1919).

Based on: *Anthistiria australis* R. Br., Prodr. Fl. Nov. Holl. 1: 200 (1810)[模式标本采自澳大利亚, Brown 6194 (BM & M)。现今的禾草学者将此归为 *Th. trianda* 复合种中。]

5. *Themeda avenacea* (F. Muell.) C. A. Gardner, Fl. W. Austral. 1: 344 (1952).

Based on: *Anthistiria avenacea* F. Muell. Fragm. V.: 206 (1866)

Syn.: *Themeda gigantea* (Cav.) Hack. subsp. *avenacea* (F. Muell.) Hack. var. *avenacea* (F. Muell.) Hack in DC., Monogr. Phan. 6:677(1889); K. Domin, Bill. Bot. 85(3):277(1915).

[模式标本采自澳大利亚, F. Muell s. n. (MEL).]

— *Anthistiria basisericea* F. Muell. Fragm. 5: 207 (1866). [模式标本采自澳大利亚, F. Mueller s. n. (MEL).]

6. *Themeda caudata* (Nees ex Hook. & Arn.) A. Camus in H. Lecomte Fl. Gén. Indo-Chine 7: 364 (1922).

Based on: *Anthistiria caudata* Nees in Hook. & Arn., Bot. Beech. Voy.: 245 (1838). [模式标本由 Beechey 采自中国; (可能存于 E).]

Syn.: *Themeda gigantea* (Cav.) Hack. subsp. *caudata* (Nees) Hack.; in DC., Monogr. Phan. 6: 676 (1889) in part.

— *Anthistiria gigantea* Cav. subsp. *caudata* (Nees) Hook. f., Fl. Brit. Ind. 7:217(1896).

— *Th. caudata* (Nees) Honda in Bot. Mag. Tokyo, 40: 108 (1926).

— *Anthistiria ciliata* A. Henry, in Trans. Asiat. Soc. Hap. 24(suppl.):108(1896) non Linn. f.

7. *Themeda ciliata* (Linn. f.) Hack. in DC. Monogr. Phan. 6:664(1889); Hook. f. (1897)^[4]. Based on: *Anthistiria ciliata* L. f. Suppl. Pl.: 113 (1781). J. D. Hooker (1897)^[4]; S. H. Koorders (1911)^[15]. [本种为 Linn. f. 的 *Anthistiria* 的模式种, 模式标本采自印度, (LINN, S(?))]

Syn.: *Anthistiria barbata* Desf. in J. de Phys. XI: 294, t. 2 (1792)[Junghuhn 1840年^[10]以 *Anthistiria barbata* Desf. 为模式种建立的新属 *Aristaria* Jungh. 未被禾草学家接受。]

— *Anthistiria scandens* Roxb. Hort. Beng.: 6 (1814), nomen; Fl. Ind., ed. Carey & Wall., 1: 253 (1820). [模式标本采自印度, Roxburgh s. n.]

— *Anthistiria semiberbis* Nees, Fl. Afr. Austr.: 125 (1841). [模式标本采自南非, Nees, s. n. (CGE, HBG?.)]

— *Themeda quadrivalvis* (L.) O. Kuntze, Rev. Gen. Pl. 2: 794 (1891). Based on: *Andropogon quadrivalvis* Linn. In Murray, Syst. Veg. ed. 13: 758 (1774). [标本在 LINN.]

8. *Themeda cymbaria* (Roxb.) Hack. in DC., Monogr. Phan. 6:668 (1889). N. L. Bor (1960); T. Cooke (1908).

Based on: *Anthistiria cymbaria* Roxb. Hort. Beng.: 6 (1814), nomen; in Fl. Ind. (ed Carey & Wallich) 1: 255 (1820). (excl. syn.), J. D. Hooker (1897)^[4] [Type: Roxburgh s. n., 采自印度].

Syn.: *Themeda serratifolia* Roberty, Monogr. Syst. Andropogon du Globe, Boissiera 9: 92 (1960).

W. Roxburgh 在 *Flora Indica*, vol. 1 第 255 页上正式发表 *Anthistiria cymbaria* Roxb., 将 *Andropogon cymbarius* L., [Mant. Alt.: 303 (1771)] 作为基名, 但其所依据的标本与 Linn. 的不同。E. Hackel 1889年^[16] 基于 Roxburgh 的 *Anthistiria cymbarica* Roxb. (excl. syn.) 建立了 *Themeda cymbarica* (Roxb.) Hack., 但订正出 Roxburgh 所引证作为异名的 *Andropogon cymbarius* L. [模式标本为 Koenig s. n. (LINN, holotype)] 并非 *Themeda* 属 (*Anthistiria*) 植物, 而为 *Andropogon* subgen. 13. *Cymbopogon* Nees sect. 2. *Hyparrhenia* (J. N. Anderss.) Hack.

之植物; O. Stapf 于 1918 年^[30] 在他的 Fl. Trop. Afr. 中将 *Andropogon cymbarius* L. 组合为 *Hyparrhenia cymbaria* (L.) Stapf; 此观点得到了 Clayton (1969) 等学者的支持. [Hackel (1889)^[6] 于 Monographiae Phanerogamarum 之第 198 页, 还引证了“*Anthistiria cymbaria* Zoll. et Mor. Syst. Ver 2. p.99 non Roxb. ex Miq”, 作为“*Apluda varia* Hack. subsp. *multica* (Linn.) Hack. var. *humilis* (Kunth) Hack. subvar. *major* Hack.” 之异名; 也即 Zoll. 和 Mor 的种为 *Apluda* 属植物, 系同名.]

9. *Themeda dacruzii* Birari in J. Bombay Nat. Hist. Soc., 70(2): 346 (1973, publ. 1974). [模式标本采自印度, 待查.]

10. *Themeda echinata* A. Camus ex Keng in Sinensia. 10: 329 (1939).

— *Themeda chinensis* (A. Camus) S. L. Chen & T. D. Zhuang in Bull. Bot. Res. (North. East. Forest. Inst.), 9(2): 59 (1989). nom. superfl.

Based on: *Th. ciliata* (Linn. f.) Hack. subsp. *chinensis* A. Camus in Bull. Mus. Hist. Nat. Paris 25(5): 423 (1920). [模式标本采自云南, J. Esquirol (方和义) 1112, (P)]

Themeda chinensis 是 *Themeda echinata* 之晚出异名, 系基于同一模式标本而建立的, 故 *Th. chinensis* 为多余名.

11. *Themeda gigantea* (Cav.) Hack. in DC., Monogr. Phan. 6: 620 (1889), (s. str.).

Based on: *Anthistiria gigantea* Cav. Icon. 5: 36 (1799), Lamina 458. [模式标本采自菲律宾群岛, (MA475297, MA475296, Type!)]

Syn: *Androscepia gigantea* (Cav.) Brongn. in Duperr. Voy. Cog. Bot.: 78 (1829);

— *Calamina gigantea* Roem. et Schult. Syst. 2: 810 (1817), non Beauv. (1812).

— *Perobachne secunda* J. & C. Presl, Rel. Haenk. 1: 348, t. 48 (1830).

— *Themeda gigantea* (Cav.) Hack. subsp. *genuina* var. *vulpina* (Anderss.) Hack. In DC., Monogr. Phan. 6: 673 (1889). Based on: *Anthistiria vulpina* Anderss. in Nov. Act. Upsal. ser. 3, 2: 245 (1856); [标本采自菲律宾: Cuming 1272; 尼泊尔: Royle 239, 240.] J. D. Hooker 1897 年^[4] 将此处处理为 *Anthistiria gigantea* Cav. subsp. *genuina* Hack. 之异名.

12. *Themeda helferi* Hack. in DC., Monogr. Phan. 6: 665 (1889).

Syn.: *Anthistiria helferi* Munro ex Hack. in DC., Monogr. Phan. 6: 665 (1889).

— *Anthistiria ciliata* Linn. f. var. *helferi* (Hack.) Hook. f., Fl. Brit. Ind. 7: 214 (1897).

— *A. helferi* Munro 之种名最初由 Munro 命名而写于模式标本台纸之上, 采自印度 (Helfer n. 6809) .

13. *Themeda hookeri* (Griseb.) A. Camus in Bull. Mus. Hist. Nat. Paris, 26:425(1920).

Based on: *Anthistiria hookeri* Griseb. in Goett. Nachr.: 91 (1868). [模式标本采自锡金 (Sikkim), J. D. Hooker et Thams s. n., (K)]

Syn.: *Androscepia glabrata* Anderss. ex Hook. f., Fl. Brit. Ind. 7: 216 (1897)

— *Themeda gigantea* (Cav.) Hack. subsp. *caudata* (Nees) Hack. in DC. Monogr. Phan. 6:676(1889), p.p.

14. *Themeda huttonensis* Bor in Indian Forest. Rec. n. s. (Bot.) I: 3, 95 (1938). [模式标本采自印度阿萨姆 N. L. Bor 6704, 6717. (K)]

15. *Themeda idjenensis* Jansen in Acta Bot. Neerl. I: 82 (1952). [模式标本采自爪哇, Koorders 42922.]

16. *Themeda japonica* (Willd.) C. Tanaka in Bull. Sci. Fak. Terkult. Kyushu Imp. Univ. 1: 194, 207 (1925).

Based on: *Anthistiria japonica* Willd. Sp. Pl. 4: 901 (1806) ex synonym., non herb.

Syn.: *Themeda forskalii* Hack. var. *major* (Thwait.) Hack. subvar. *japonica* (Willd.) Hack. in DC., Monogr. Phan. 6: 663 (1889).

— *Themeda triandra* Forssk. var. *japonica* (Willd.) Makino in Bot. Mag. Tokyo 26: 213 (1912).

17. *Themeda intermedia* (Hack.) Bor in Indian Forest Rec. n. s., (Bot.) I: 96 (1938).

Based on: *Themeda gigantea* (Cav.) Hack. subsp. *intermedia* Hack. in DC., Monogr. Phan. 6: 675 (1889).

— *Th. intermedia* (Hack.) Jansen in Act. Bot. Neerl. 1: 481 (1952). [模式标本采自印度, Hooker, J. D. et Thoms. s. n., (K)]

18. *Themeda laxa* (Anderss.) A. Camus in Bull. Mus. Hist. Nat. Paris, 26(5):423(1920).

Based on: *Anthistiria laxa* Anderss. in Nov. Act. Upsal. Ser. III. 2: 243 (1856). [模式标本采自尼泊尔, Wallich. s. n.]

19. *Themeda longispatha* (Hack.) Raiz. et Jain. in Ind. For. 80: 45 (1954)

Based on: *Th. gigantea* (Cav.) Hack. subsp. *avenacea* (F. Muell.) Hack. var. *longispatha* Hack. in DC., Monogr. Phan. 6: 677 (1889). [模式标本采自印度(喜马拉雅), J. S. Gamble 3323A, (?)]

20. *Themeda minor* L. Liou in Fl. Xizangica, 5: 343 (1987). [模式标本采自中国西藏, 青藏队 73-654, (PE).]

21. *Themeda mooneyi* Bor in Kew Bull. 1951: 451 (1952). [模式标本采自印度, H. F. Mooney 4064 (K).]

22. *Themeda novoguineensis* (Rehder) Jansen in Act. Bot. Neerl. 1: 483 (1952).

Based on: *Th. gigantea* (Cav.) Hack. var. *novoguineensis* Rehder in J. Arn. Arb. 29: 374 (1948). [模式标本采自新几内亚, Brass 3710 (GH, US).]

23. *Themeda saxicola* Bor in Kew Bull. 1951: 452 (1952). [模式标本采自印度, H. F. Mooney 4241, (K).]

24. *Themeda strigosa* (Buch.-Ham. ex Hook. f.) A. Camus in Bull. Mus. Hist. Nat. Paris, 26: 423 (1920).

Based on: *Anthistiria strigosa* Buch.-Ham. ex Hook. f. Fl. Brit. Ind. 7: 214 (1897). [凭证标本: Hamilton s. n. (?)]

25. *Themeda subsericans* (Nees ex Steud.) Ridley, Fl. Mal. Penins. 5: 212 (1925).

Based on: *Anthistiria subsericans* Nees ex Steud. Syn. Pl. Gram. : 401 (1854). [模式标本采自印度, Wallich 8774B(?).]

— *Themeda gigantea* (Cav.) Hack. subsp. *arundinacea* (Roxb.) Hack. var. *subsericans* (Nees ex Steud.) Hack. in DC., Monogr. Phan. 6: 674 (1889).

26. *Themeda thwaitesii* (Hook. f.) A. Camus in Bull. Mus. Hist. Nat. Paris, 26:424(1920).

Based on: *Anthistiria thwaitesii* Hook. f., Fl. Brit. Ind. 7: 215 (1897). [模式标本采自斯里兰卡, C. P. Thwaites 961 in part, (K).]

27. *Themeda tremula* (Nees ex Steud.) Hack. in DC., Monogr. Phan. 6:667(1889).

Based on: *Anthistiria tremula* Nees ex Steud., Syn. Pl. Gram. 1: 401 (1854).

Syn: *Androscepia tremula* Anderss. in Nov. Act. Upsal. ser. III. 2: 247 (1856). [凭证标本采自印度和斯里兰卡, Wallich 8765 (印度) Thwaites 961 p. [斯里兰卡]]

28. *Themeda triandra* Forsskal. Fl. Aegypt.-Arab.: 178 (1775).

Syn.: *Anthistiria argentea* Nees, Gram. Afr. Austr.: 127 (1841). [模式标本采自南非, Eckl. et Zeyh. 54, Drege 2050 (存放标本馆不详)]

Anthistiria arguens Nees, Gram. Afr. Austr.: 124 (1841), non Willd. (1806).

Themeda forskalii Hack. var. *argentea* (Nees) Hack. in DC., Monogr. Phan. 6: 661(1889).

Themeda triandra Forsk. var. *argentea* (Nees) Domin, Bibl. Bot. 85(3): 280 (1915).

— *Anthistiria brachyarthra* Boiss. Diagn. Pl. Orient. ser. I, 2(13):71 (1854). [Boisser s. n. (G)]

Themeda brachyantha (Boiss.) Trab. in Batt. & Trab. Fl. de Alger. [Monoc.]: 129(1895).

Th. forskalii Hack. var. *brachyantha* (Baiss.) Hackel (1889)^[16]; K. Domin (1915)^[17].

— *Themeda triandra* Forsk. var. *bracteosa* Peter, F. D. O-A. 1, Anh.: 17, fig. 17/1 (1930). [模式标本采自坦桑尼亚, Peter 36734 (B, 已遭毁坏)].

— *Anthistiria caespitosa* Anderss. in Nov. Act. Upsal. ser. III. 2: 241 (1856). [模式标本采自澳大利亚西部, Drumm. 984].

— *Themeda triandra* Forsk. var. *caesia* Domin, in Bibl. Bot. 85(3): 279 (1915). [模式标本采自澳大利亚, Domin s. n.]

— *Anthistiria ciliata* Cav. ex Spreng, Syst. Veg. 1: 291 (1825), non Linn. f. (1787).

— *Anthistiria ciliata* Retz. Obs. Fasc. 3: 11 (1891), non Linn. f. (1781).

— *Anthistiria cuspidata* Anderss. in Nov. Act. Upsal ser. III. 2: 242 (1856). [模式标本采自澳大利亚, Ecklon 8148].

Themeda triandra Forsk. var. *imberbis* (Retz.) Thell. subvar. (vel. f.) *cuspidata* (Anderss.) Domin. Bibl. Bot. 85(3): 277-278 (1915)^[17].

— *Anthistiria depauperata* Anderss. in Nov. Act. Upsal. ser. III. 2: 243 (1856). E. D. Merrill (1925)^[27].

Themeda forskalii Hack. subsp. *vulgaris* Hack. var. *depauperata* (Anderss.) Hack. in DC.

Monogr. Phan. 6: 660 (1889).

— *Anthistiria desfontainii* Kunth, Rev. Gram. 1: 161 (1829). pro. nom. n.: *Anthistiria invervis* Desf. in J de Phys. 40: 293, t. 1. (1792), non Retz. (1783) [模式标本: Desfontaines s. n. (FI?B?)].

— *Themeda forskalii* Hack ex Duthie, Fodder Grass. N. India, 43 (1888); Hackel in DC., Monogr. Phan. 6: 659 (1889), nom. superfl.

Based on: *Anthistiria imberbis* Retz. (1783) [模式标本采自南非: Sparrmann s. n. (LD)]. [*Anthistiria imberbis* Desf. in J de Phys. 40: 293, t. 1. (1792), non Retz. (1783) Desf. 为晚出异名, 1829年 Kunth 将其更名为: *A. desfontainii* Kunth, Rev. Gram. 1: 161 (1829); 模式标本为: Desfontaines s. n. (B. FI?)^[6]].

Anthistiria forskalii Kunth, Rev. Gram. 1: 162 (1829) nom. superfl.

Based on: *Themeda polugama* Gmel., Syst. Nat. 2: 147 (1791), nom. superfl. Based on: *Themeda triandra* Forssk. Fl. Aegy.-Arab.: 178 (1775).

— *Anthistiria imberbis* Retz. Obs. Bot. 3: 11 (1783). non. Desf. (1792). [模式标本采自南非, Sparrmann! (LD)].

Themeda forskalii Hack. var. *imberbis* (Retz.) Hack. in DC., Monogr. Phan. 6: 661 (1889).

Themeda imberbis (Retz.) T. Cooke, Fl. Bombay, 2: 993 (1908).

Themeda triandra Forssk. var. *imberbis* (Retz.) Hack. in Proc. Trans. Rhod. Sci. Ass. 7: 63 (1908).

Calamina imberbis (Retz.) Roem. et Schult., Syst. Veg. 2: 810 (1817).

— *Anthistiria paleacea* (Poir.) Ball. in J Linn. Soc. 16: 734 (1878). Based on: *Stipa paleacea* Poir. Voy. Barb. 2: 101 (1789). [模式标本采自阿尔及利亚 Poirel s. n. (P, holotype)].

Anthistiria giauca Desf., Fl. Atlant. 2: 380, fig. 254 (1800), nom. superfl. Based on *Stipa paleacea* Poir.

Themeda forskalii Hack. var. *paleacea* (Poir.) Th. Dur. & Schinz. Consp. Fl. Afr. 5: 731 (1894).

— *Anthistiria polystachya* Roxb. Hort. Beng.: 6 (1814), nomen; Fl. Ind. ed. Carey & Wall., 1: 252 (1820).

— *Anthistiria puberula* Anderss. in Nov. Act. Upsal. ser. III. 2: 240 (1856). [模式标本采自印度, Wallich 8764E].

Themeda forskalii Hack. var. *major* (Thwait.) Hack. subvar. *puberula* (Anderss.) Hack. (1889)^[6].

— *Anthistiria punctata* Hochst. in Schimp. Pl. Abyss.: 73 (1841) ex A. Rich. Tent. Fl. Abyss. 2: 448 (1851). [标本采自埃塞俄比亚, Schimper 73, 1555 (K. P.)]

Themeda forskalii Hack. var. *punctata* (Hochst.) Hackel (1889)^[6].

Themeda triandra Forsk. var. *punctata* (Hochst. ex A. Rich.) Stapf in Fl. Trop. Afr. 9: 419 (1919).

- *Anthistiria subglabra* Buese, in Miq., Pl. Jungh.: 363 (?).
- *Anthistiria syriaca* Boiss. Diagn. ser. I. 13: 72 (1854)[模式标本产地不详, P. E. Boissier s. n. (G)].
- Themeda triandra* Forsk. var. *syriaca* (Boiss.) Domin in Bibl. Bot. 85(3): 280 (1915).
- Themeda forskalii* Hack. var. *syriaca* (Boiss.) Hack. in DC., Monogr. Phan. 6:663(1889).
- Anthistiria ciliata* var. *syriaca* Boiss. Fl. Or. 5: 460 (1856?).
- *Anthistiria vulgaris* Hack. in Engl. et Prantl, Nat. Pflanzenfam. II. 2: 29 (1887).
- Themeda triandra* Forsk. var. *vulgaris* (Hack.) Domin, Bibl. Bot. 85(3): 278 (1915); Honda, Bot. Magz. xl (471): 107 (1926).
- Themeda forskalii* Hack. var. *vulgaris* Hack. in DC. Monogr. Phan. 6: 660 (1889).
- *Themeda polygama* J. F. Gmel. Syst. Nat. 2: 149 (1791) nom. Superfl.
- Based on: *Th. triandra* Forsk. [模式标本采自也门, Forsskal, s. n. (C), 本种为 *Themeda* 属之模式种。]
- var. 1 *burchellii* (Hack.) Domin in Bibl. Bot. 85: 280 (1915).
- Based on: *Th. forskalii* Hack. var. *burchellii* Hack. in DC., Monogr. Phan. 6: 661 (1889). [模式标本采自南非, Burchell 1844, 2095 (K, isotype)]
- var. 2 *glauca* (Hack.) Thell., Fl. Adven. Montpellier : 75 (1912).
- Based on: *Th. forskalii* Hack. var. *glauca* Hack., in DC., Monogr. Phan. 6: 663 (1889). [模式标本采自阿尔及尼亚, Desfontaines s. n. (P).]
- *Anthistiria glauca* Desf. Fl. Atlant. 2: 380, t. 254, (1799), nom. superfl.; Based on: *Stipa paleacea* Poir. (1789). [Desf. 的标本存于 P]
- *Themeda glauca* (Desf.) Battand. & Trab. Fl. Alger., Morocot.: 128 (1895).
- *Th. forskalii* Hack. var. *glauca* Hack. in DC., Monogr. Phan. 6: 663 (1889); Based on: *Anthistiria glauca* Desf.
- var. 3. *hispidata* Stapf in Fl. Trop. Afr. 9: 418 (1919). [模式标本采自南非, Drege s. n. (K)]
- var. 4. *sublaevigata* Chiov. in Webbia 8: 61 (1951). [模式标本采自埃塞俄比亚, Corradi 1153, (FI, Syn.) 有许多其它的 Syntypes]
- var. 5. *trachyspatha* Goossens in Kew Bull. 1934: 195 (1934).[模式标本采自斯威士兰(南非), Van Uuren (PRE 10082, holotype)]
- var. 6. *trichospatha* Domin in Bibl. Bot. 85(3): 179 (1915). [模式标本采自澳大利亚, Domin s. n. (PRC)]
- var. 7. *fascicular* Domin in Bill. Bot. 85(3): 279 (1915). [模式标本采自澳大利亚, Domin s. n. (PRC)]
- var. 8. *major* (Thwait.) K. Domin in Bibl. Bot. 85(3): 279 (1915).
- Based on: *Anthistiria ciliata* Linn. f. *major* Thwait. Enum. Pl. Zeyl.: 366 (1864). [模式标本采自斯里兰卡, Thwaites s. n. (K 和 PDA?)]
- Syn: *Themeda forskalii* Hack. var. *major* (Thwait.) Hack. in DC., Monogr. Phan. 6:662(1889).

- *Anthistiria imberbis* Retz. var. *major* (Thwait.) Hook. f. Fl. Brit. Ind. 7: 213 (1897).
var. 9. *praealta* Domin, in Bibl. Bot. 85(3): 279 (1915). [模式标本采自澳大利亚, Domin s. n. (PRC)]
var. 10. *rigidiuscula* Domin, in Bibl. Bot. 85(3): 279 (1915). [模式标本采自澳大利亚, Domin s. n. (PRC)]
var. 11. *xiphinm* Domin, in Bibl. Bot. 85(3): 280 (1915). [模式标本采自澳大利亚, Domin s. n. (PRC)]
var. 12 *roylei* (Hook. f.) Domin, in Bibl. Bot. 85(3): 280 (1915).
Based on: *Anthistiria imberbis* Retz. var. *roylei* Hook. f. in Fl. Brit. Ind. 7: 213 (1897).
[模式标本采自印度, ? (K)]
var. 13. *mollissima* (Nees.) Domin, in Bibl. Bot. 85(3): 280 (1915).
Based on: *Anthistiria ciliata* var. *mollissima* Nees. Fl. Afr. Austr.: 121 (1841).
29. *Themeda trichiata* S. L. Chen & J. D. Zhuang in Bull. Bot. Res. 9(2): 58 (1989).
[模式标本采自广西, 中科院广西植物土壤调查队白色队 0114, (JSBI)]
30. *Themeda unica* S. L. Chen & T. D. Zhuang in Bull. Bot. Res. 9(2): 56 (1989).
[模式标本采自安徽, P. Courtois 13169, (JSBI)]
31. *Themeda villosa* (Poir.) A. Camus in Lecomte Fl. Gén. Indo-Chine, 7: 364 (1922).
Based on: *Anthistiria villosa* Poir. in Lamk. Encycl. Meth. Bot. Suppl. 1: 396 (1810).
凭证标本采自印度 (Hook. f. et Thoms. sn., Wallich 8776 B et A ex P) 和爪哇 (Zollinger. 1029).
— *Themeda gigantea* (Cav.) Hack. subsp. *villosa* (Poir.) Hack. in DC., Monog. Phan. 6: 675 (1889).
— *Heterelytron scabrum* Jungh. in Hoen. & De Vriese, Tijdschr. Nat. Gesch. Physiol. 7: 295 (1840).
— *Anthistiria mutica* (Hassk.) Steud. Syn. Pl. Glum. 1: 401 (1854).
Based on: *Aristaria mutica* Hassk. in Hoen. & De Vriese, Tijdschr. nat. Geschied. 10: 117 (1843)^[4].
— *Androscepia gigantea* Cav. var. *mutica* Anderss. [in Nov. Act. Upsal. ser. III. 2: 243 (1856)], ex Hook. f. Fl. Brit. Ind. 7: 216 (1897). [凭证标本采自印度和爪哇, Wall, 8776A]
— *Th. gigantea* (Cav.) Hack. subsp. *villosa* (Poir.) Hack. var. *villosa* (Poir.) Hack. subvar. *mutica* (Hassk.) Hack. in DC. Monogr. Phan. 6: 675 (1889).
32. *Themeda yunnanensis* S. L. Chen & T. D. Zhuang in Bull. Bot. Res. (North.-East. Forest. Inst.) 9(2): 60 (1989). [模式标本采自中国云南滇西北, 金沙江队 63-6883, (Type JSBI; Isotype PE, Kun, YUNU)]
33. *Themeda yunnanensis* S. L. Chen & T. D. Zhuang in Bull. Bot. Res. 9(2): 58 (1989). [模式标本采自中国云南, 蔡西陶 61976 (Type, JSBI; Isotype, PE)]

2.2 不属于 *Themeda* Forsskal 的种

Androscepi *barteri* Anderss. ex Oliver = *Hyparrhenia involucrata* Stapf based on *Anthistiria barteri* Munro ex Oliver (1875), nom. nud. in adnot., non *H. Barteri* (Hack.) Stapf (1918), based on *Andropogon barteri* Hack. (1885)

Anthistiria abyssinica Hochst. ex A. Rich. = *Exothea abyssinica* (Hochst. ex A. Rich.) Anderss.

A. androgonoides Steud. = *Hyparrhenia bracteata* (Humb. & Bonpl. ex Willd.) Stapf

A. arguta Nees ex Steud. = *Iseilema argutum* Anderss.

A. balansae Crecost & Lemarie, [Based on: *Themeda effusa* Balansa] = *Hyparrhenia familiaris* (Steud.) Stapf

A. ciliata L. f. var. *hispida* (L. f.) Nees = *Tristachya leucothrix* Trin. ex Nees.

A. cimicina Edgew. = *Iseilema prostrata*

A. dissoluta Nees ex Steud. = *Hyperthelia dissoluta* (Nees ex Steud.) W. D. Clayton

A. fasciculata Thw. = *Hyparrhenia filipendula* (Hochst.) Stapf

A. flosculosa F. Muell. = *Germainia capitata*

A. foliosa H. B. & K. nom. superfl.: *A. reflexa* H. B. & K. = *Hyparrhenia bracteata*

A. glandulosa Wight ex Steud. = *Iseilema prostrata*

A. heteroclita Roxb. = *Pseudanthistiria heteroclitus* (Roxb.) Hook. f.

A. hispida (L. f.) Thunb. Based on *Avena hispida* L. f. nom. superfl. = *Tristachya leucothrix* Trin. ex Nees

A. humboldtii Nees, nom. superfl.: Based on: *Andropogon bracteatus* H. & B. ex Willd. = *Hyparrhenia bracteata*

A. latifolia Anderss. = *Hyparrhenia cymbaria* (L.) Stapf

A. linneana Steud. = *Iseilema prostrata*

A. membranacea Lindl. = *Iseilema membranacea* (Lindl.) Domin

A. multiplex Hochst ex A. Rich. = *Hyparrhenia mutiplex* (Hochst. ex A. Rich.) Anderss.

A. pilosa Presl. = *Hyparrhenia bracteata*

A. prostrata (L.) Willd. Based on *Andropogon prostratus* L. = *Iseilema prostrata* (L.) Anderss.

A. pseudo-cymbaris Steud. = *Hyparrhenia anthistirioides* (Hochst. ex A. Rich.) Anderss. ex Stapf

A. quinqueplex Hochst. ex Steud. = *Hyparrhenia anthistirioides*

A. torillis Presl = *Cymbopogon hamatulus* (Nees ex Hook. et Arn.) A. Camus

A. wightii Nees ex Steud. Based on *Andropogon prostratus* L. = *Iseilema prostrata*

Themeda capitata (Balansa & Poitrass.) Roberty = *Germainia capitata* Balansa & Poitrass.

T. foliosa (H. B. K.) Balansa = *Hyparrhenia bracteata*

Themeda gossweileri (Stapf) Roberty Based on *Pleiadelphia gossweileri* Stapf = *Elymandra gossweileri* (Stapf) W. D. Clayton

T. prostrata (L.) Roberty = *Iseilema prostrata*

2.3 存疑

1. *Anthistiria bladhii* Wight in Wall. Cat. n. 8770. 有关此种文献所知甚少, 存疑! [标本采自 India or]

2. *Anthistiria glabrifolia* Desv. Opusc. Sci. Phys. Nat.: 71 (1831). 此种很少为学者所知, 其文献描述不完整, 有的学者认为其即为“*ciliata*”, 标本采自印度, 归属有疑问, 有待进一步研究。

3. *Anthistiria ramosa* Thumb. ex Anderss. in Nov. Act. Upsal. Ser. III. 2: 247 (1856). Andersson 1856年^[3]发表此种之后, 几乎再未见到有关此种的文献。在尚未见到凭证标本的情况下, 对此种作出任何处理都是不明智的。有些学者将此种处理为 *Apluda gigantea* 之异名。

4. *Anthistiria vulcanica* Steud. Syn. Pl. Gram.: 400 (1854). Hackel (1889)^[6]将此种排除于 *Themeda* 属之外。在未仔细研究 Steudel 的标本之前(标本采自 Ins. Santorin), 未便确定本种之归属。

除上述作为种发表的 102 个双名外, 尚有许多亚种、变种被发表, 尤其在广布种中以亚种、变种形式发表的名称为多, 而且禾草学者间分歧甚大。至于全部之名称和系统分类之处理待以后于专著中发表。

3 系统分类研究现状及存在问题

菅属 *Themeda* Forssk. (1775)[*Anthistiria* L. f. (1779)] 自建立起至本世纪 30 年代间的 150 年间, 主要是经典分类学研究。自 30 年代始, 这种局面才随着植物学的发展, 新的分支学科的产生与发展才得以改变。

自 P. Forsskal 之后, 欧洲学者以 *Anthistiria* L. f. 属名发表了许多新种, 如 R. Brown (1810, 1814), W. Roxburgh (1820), C. B. Trinius (1826-1836), S. Endlicher (1836)^[22], K. S. Kunth (1829, 1833), Nees (1841), Steudel (1855) 等。1856 年, N. J. Andersson 发表了他的有关本类群的第一个世界性的总结研究^[3], 其观点被以后的学者所采纳和补充, 如 J. D. Hooker (1881, 1883, 1896-1897), F. A. W. Miquel (1857)。E. Hackel 在其 1883^[19] 和 1887^[8] 年的著作中仍采用 *Anthistiria*, 而后经文献考订研究, 他发现 *Themeda* 优先于 *Anthistiria*, 并在他的名著“*Andropogoneae*”中^[6] 给予了订正, 并对 *Themeda* 属作了世界性的修订, 且开始采用命名法。然而 *Themeda* 属并未被广为接受, 一是由于当时的命名法规尚处于不成熟的初期阶段, 二是由于 *Anthistiria* 已被采用一百余年, 如若变更会产生许多学名的变化, 故而以 J. D. Hooker 为首的学者仍坚持采用 *Anthistiria*^[4,20]。这种局面一直持续到本世纪 30 年代才开始有了真正的改变, 而且新的种与变种不停地被发现, 同时也建立有新的属使得 *Themeda* 属的范畴逐渐变得较为清晰。然而基本全是经典的分类, 主要有: O. Kuntze^[21], C. G. de Dalla Torre &

H. Harms^[23], S. H. Koorders^[15], A. S. Hitchcock^[25], J. W. Bews^[26], K. Domin^[17], O. Stapf^[29,30], F. W. Junghuhn^[10], F. V. Mueller, , Pre (1830), S. T. Blake (1944), Camus^[28], Y. L. Keng^[32], J. R. Rehder (1948), P. Jansen (1952), N. L. Bor^[33], G. Roberty^[31], Lazarides (1980), B. K. Simon^[12], G. E. Gibbs Russell^[14], W. D. Clayton^[24]。近期中国学者有影响的工作是陈守良^[35]，她将 *Themeda* 属分为 2 个组 (section)，其分组的依据基本上以 J. D. Hooker 对本属的分类^[4]，但在命名法上存在问题[Sect. 2. *Themeda*，是依据自动名规则而建立的，故应以属的模式种 *Th. triandra* Forssk. 为组的模式种，而陈所选定黄背草 *Th. japonica* 为组模式是违背规则的]，这在新近出版的《中国植物志》10(2)上得到了订正^[36]。此外，由 A. T Brongniart 1829 年建立的 *Andrascepi* Brong., C. Presl 和 J. S. Presl 1830 年建立的 *Perobchne* J. & C. Presl, 以及由 Junghuhn, F. W. 1840 年建立的 *Aristaria* Jungh. 和 *Heterelytron* Jungh. 等属，均未被禾草分类学家接受，而作为异名处理。

在细胞学研究方面，Авдулов, 1928 年首次报道了禾本科的细胞染色体资料，*Themeda arguens* Hack. 是被报道的本属第一个种 ($2n=20$)，第二个种是 *Th. forskalii* Hack. ($2n=60$)。而后在 50-60 年代间有许多学者作了本属及近缘属的细胞学研究如：Tateoka (1954, 1957, 1965), Alehra, K. L. (1955), Gluckmann (1955), Raman et al (1959) de Wet (1960), Hayman (1963), Larsen (1963), Woodland (1964), Pritchard, A. J. & Gould (1964), Gould, F. W. (1956), Birari, S. P. (1982), Sinha et al (1990), Liebenberg (1990) 等。他们不但弄清了属的染色体基数 $x=10$ ，而且了解了本属细胞染色体的变异情况 (二倍体至多倍体及非整倍体)，特别是非整倍体性在少数广布种中的出现及复合种的细胞地理研究，使得分类学家对“种”的认识更进了一步。

此外，一些学者^[37,38]对 *Themeda* 属的繁育方式进行了研究，发现其中部分种含无融合生殖现象。

在微形态学与解剖学方面，下述学者作了大量工作：A. Grob (1896), E. Breakwell (1915), A. P. Goossen 和 J. J. Theron (1934), M. G. Mers 和 K. M. Aymer-Ainslee (1935), J. W. Vickery (1935), C. R. Metcalfe (1960)^[40]，陈守良等 (1993)。

植物地理学方面的研究甚少，生态学方面的工作主要是稀树草原和干热河谷 (群落学) 以及与人为和火等干扰有关的工作，如 W. Hartley (1958), J. M. J. de Wet (1960), 吴征镒 (1983)。

有关 *Themeda* 及近缘属古生物学方面的研究，J. R. Thomassorr 于 1986 年对 1820-1986 年间发表的禾草化石记录作了检查与总结，*Themeda* 及近缘属 *Hyparrhenia* 的确切的化石记录是来自非洲肯尼亚的更新世；这方面的工作还较少，仅有 P. G. Palmer (1976), J. S. Gardner (1886) 等人的工作。

Themeda 及近缘类群 (或 Trib. Andropogoneae) 的演化与系统发育方面的研究较少，主要有 L. van der Pijl (1958, 1960, 1961, 1966), H. T. Clifford (1961), G. L. Stebbins (1972) 等。

正如本文前述所示，自 *Themeda* 属建立至今的两百年中，主要是经典分类的区域性志或是考察资料为主导的科学积累工作，特别是 Andersson 和 Hackel 之后一百余年间，至今尚未有一个系统的 *Themeda* 属的研究，即使是开展了一些新的实验学科的研究，也只是处于零星的科学资料积累的状态，真正反映系统进化的自然分类尚未有人作过。种的归属、转隶、分合及等级

的多变,一方面与分类学的学科发展,分类学家的观点、方法有关,另一方面也与须芒草族 Trib. Andropogoneae 中许多属种之特征界限不清有关,而这正是 *Themeda* 及其近缘属仍处于剧烈的演化之中所致。基于此, *Themeda* 属的分类至少存在如下的问题: 1. 属及其近缘类群的关系仍不明确,其属的范畴有待修订,系统位置尚不明确; 2. 属的起源与演化关系从未有人研究过,尚未有一个自然的分类系统; 3. 区系地理及现代空间分布格局的形成与发展,尚未被系统阐述,因而,属的分类仍处于十分混乱之中。

因此,有必要对 *Themeda* 属及近缘类群进行多学科多层次的系统分类研究,划定它的范畴,确定它的系统位置,阐明它的起源与演化规律,建立符合自然的分类系统,并完成本属的世界性分类专著。笔者在本文中仅论述种之命名和分类及其归属,有关上述诸方面的研究结果,将分期发表,在此不论及。

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