



中国湖北红豆杉属一新变型

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摘要:报道了红豆杉属 1 新变型——保康红豆杉 [*Taxus chinensis* (Pilger) Rehd f. *baokangsis* Y. J. Fei]。该变型与原变种南方红豆杉 [*Taxus chinensis* (Pilger) Rehd. var. *mairei* (Lemee et Lévl.) Cheng et L. K. Fu] 主要区别在于其雄株上有部分枝条发育成雌性枝条或雌雄球花在同一果枝上, 呈现雌雄同株现象。凭证模式标本藏于武汉植物园标本馆(编号 Y. J. Fei001, HIB)。

关键词: 红豆杉属; 变型; 保康红豆杉; 雌雄同株

中图分类号: Q949.6; S791.49 **文献标志码:** A

A New Forma of the Genus *Taxus* L. from Hubei, China

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Abstract: A new forma of *Taxus*, *T. chinensis* (Pilger) Rehd f. *baokangsis* Y. J. Fei that grown in Hubei Province, China, was reported in this study. There are difference between this new forma of *Taxus* and the *T. chinensis* (Pilger) Rehd. var. *mairei* (Lemee et Lévl.) Cheng et L. K. Fu. The new forma of *Taxus* has some branches of the male plants become female or staminate strobilus and female cone in the same fruit branch. That means it is monoecism. Holotype was deposited in the herbarium of the Wuhan Botanical Garden (Number Y. J. Fei001, HIB), China.

Key words: *Taxus*; forma; *T. chinensis* (Pilger) Rehd. f. *baokangsis* Y. J. Fei; monoecism

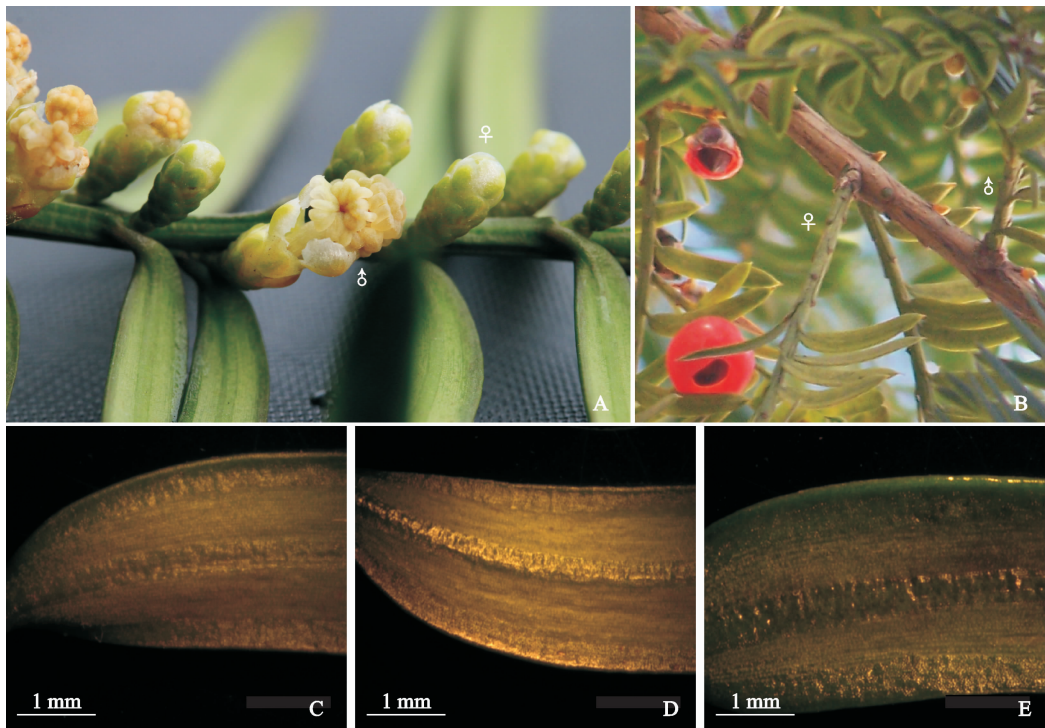
笔者 2012 年 11 月在湖北保康县龙坪村、朱砂村进行野生南方红豆杉 [*Taxus chinensis* (Pilger) Rehd. var. *mairei* (Lemee et Lévl.) Cheng et L. K. Fu] 种质资源调查时, 采集到 1 份特殊的南方红豆杉雌雄同株的有果有雄球花的标本, 目标物种存在于常绿落叶阔叶针叶混交林中, 阔叶树以落叶为主^[1]; 2013 年 11 月, 为了研究南方红豆杉生殖发育, 采集大小孢子叶球时, 又在湖北荆州市行道树中, 发现了同样的现象, 该种源于 40 年前来自江西庐山, 连续观察 3 年, 性状稳定。通过查阅相关文献^[2-3], 比较研究了叶片形态特征, 确认为系红豆杉

属一新变型, 定名为保康红豆杉 [*Taxus chinensis* (Pilger) Rehd. f. *baokangsis* Y. J. Fei]。

1 保康红豆杉新变型(图 1)

T. chinensis (Pilger) Rehd. f. *baokangsis* Y. J. Fei, f. nov. (Fig. 1).

The major difference between *Taxus chinensis* (Pilger) Rehd. f. *baokangsis* Y. J. Fei and *Taxus chinensis* (Pilger) Rehd. var. *mairei* (Lemee et Lévl.) Cheng et L. K. Fu is that some branches are attached with female strobilus on male plant or



A. 雌雄同株, ♀ ♂ 示雌雄球花在同一果枝上; B. 雌雄同株, ♀ 示主枝上雌球花发育成的成熟果实, ♂ 示同一枝条上的当年生雄球花;
C. 南方红豆杉雌株叶背面乳突; D. 南方红豆杉雄株叶背面乳突; E. 保康红豆杉雌雄同株叶背面乳突

图1 保康红豆杉和南方红豆杉

A. Monoecism, ♀ ♂ refer to female strobilus and male strobilus on the same fruit branch; B. Monoecism, ♀ refers to mature seeds developed from female strobilus on main branches, ♂ refers to male strobilus of the year on the same branch; C. Papillae on the abaxial leaf surface of female *Taxus chinensis* (Pilger) Rehd, var. *mairei* (Lemee et Lévl.) Cheng et L. K. Fu; D. Papillae on the abaxial leaf surface of male *Taxus chinensis* (Pilger) Rehd, var. *mairei* (Lemee et Lévl.) Cheng et L. K. Fu; E. Papillae on the abaxial leaf surface of monoecismic *Taxus chinensis* (Pilger) Rhed, f. *baokangsis* Y. J. Fei

Fig. 1 *Taxus chinensis* (Pilger) Rhed, f. *baokangsis* Y. J. Fei and *Taxus chinensis* (Pilger) Rhed, var. *mairei* (Lemee et Lévl.) Cheng et L. K. Fu

staminate strobilus and female cone in the same fruit branch, resulting in monoecism. There are bigger papillae on the abaxial leaf surface and leaf edge of *Taxus chinensis* (Pilger) Rehd, f. *baokangsis* Y. J. Fei, while the papillae on the abaxial leaf surface of female *Taxus chinensis* (Pilger) Rehd, var. *mairei* (Lemee et Lévl.) Cheng et L. K. Fu are much smaller and the vein on the abaxial leaf surface is protuberant for the male plant. Target species is growing in the mixed evergreen and deciduous conifer. Broadleaf are deciduous mainly. The forest mainly consists of bloom (*Chimonanthus praecox*), Japanese cedar (*Cryptomeria fortunei*), ginkgo (*Ginkgo biloba*), chestnut (*Castanea mollissima*), Iris (*Iris tectorum*) and other plants.

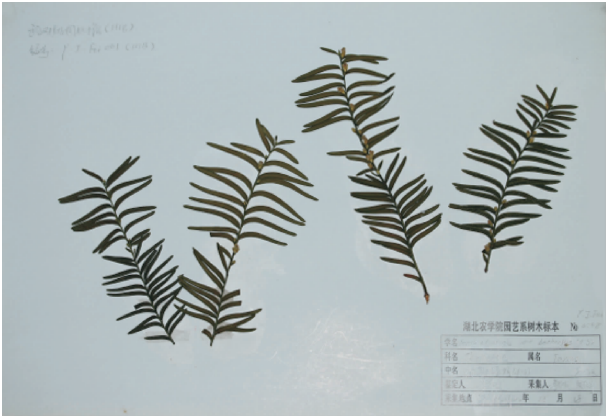


图2 保康红豆杉标本[Y. J. Fei001(HIB)(Holotype)]
Fig. 2 Specimen of *Taxus chinensis* (Pilger) Rhed, f. *baokangsis*[Y. J. Fei001(HIB) (Holotype)]

保康红豆杉与原变种南方红豆杉[*T. chinensis* (Pilger) Rehd, var. *mairei* (Lemee et Lévl.) Cheng et L. K. Fu]主要区别在于其雄株上有部分

枝条发育成雌性枝条或雌雄球花在同一果枝上,呈现雌雄同株现象。二者叶形相似,呈弯镰状,区别在于保康红豆杉[*T. chinensis* (Pilger) Rehd. var. *baokangsis* Y. J. Fei]叶背面及边带密生较大乳突,南方红豆杉雌株叶片乳突较小,雄株叶背脉明显突出,边带乳突细密。目标物种存在于常绿落叶阔叶针叶混交林中,阔叶树以落叶为主,林内主要有腊梅(*Chimonanthus praecox*)、柳杉(*Cryptomeria fortune*)、银杏(*Ginkgo biloba*)、栗树(*Castanea mollissima*)和鸢尾(*Iris tectorum*)等植物。

China, Hubei Baokang(湖北保康): Longpingcun(龙坪村), alt. 1 055 m, Zhushacun(朱砂村), alt. 930 m. 2012-11-05, Y. J. Fei, C. Y. Zhou, L. Y. Yuan, J. H. Shen et R. Qi(费永俊,周存宇,袁龙义,沈瑾花,齐蕊)Y. J. Fei001(HIB)(Holotype), 见图 1。

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2 讨 论

中国红豆杉属(*Taxus*)4 种 1 变种, 均被列为中国二类保护植物^[4], 为优良的材用、药用、园林观赏树种^[6]。该属球花单生叶腋, 雌雄异株, 分类的主要依据是叶片形态、叶被气孔带、叶被中脉或叶被边缘角质乳突的特点, 其次考虑了种子特征^[2]。1999 年, 笔者发表了栽培新变种荆江红豆杉[*T. chinensis* (Pilger) Rehd. cv. ‘jingjiangensis’ Y. J. Fei]^[6], 甄别依据是雄球花的差异。本次发现的雌雄同株现象, 陈立新等 2013 年作过报道, 但没有对变异特征做具体描述^[7], 是否是同一种变异类型还有待考证。从遗传变异与性别进化看, 南方红豆杉雌雄同株处在性别进化的初级阶段, 视为一个新变型比较合适。

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(编辑: 潘新社)