Preliminary observation of native glyptostrobus pensilis (taxodiaceae) stands in vietnam

Averyanov L.V., Phan K.L., Nguyen T.H., Nguyen S.K., Nguyen T.V., Pham T.D.

Komarov Botanical Institute of the Russian Academy of Sciences, Prof. Popov str., 2, St. Petersburg, 197376, Russian Federation; Institute of Ecology and Biological Resources, 18 Hoang Quoc Viet, Nghia Do, Cau Giay, Hanoi, Viet Nam; Center for Plant Conservation, Vietnam Union of Science and Technology Associations, 25/32/191, Lac Long Quan Rd, Nghia Do, Cau Giay District, Ha Noi, Viet Nam; Hanoi University of Science, 334 Nguyen Trai, Thanh Xuan, Hanoi, Viet Nam

Abstract: Results of preliminary studies of last remnants of Glyptostrobus pensilis native populations in Vietnam are presented in the paper in form of standard taxonomical treatment with comments on ecology, population structure and natural conditions of its habitats. Perspectives of conservation of this unique Tertiary relict are specially assessed and discussed.

Author Keywords: Eastern Indochina; Glyptostrobus pensilis; Native populations; Taxodiaceae; Tertiary relict; Vietnam

Index Keywords: Cupressaceae; Glyptostrobus pensilis

Year: 2009

Source title: Taiwania

Volume: 54

Issue: 3

Page : 191-212

Link: Scorpus Link

Correspondence Address: Averyanov, L. V.; Komarov Botanical Institute of the Russian Academy of Sciences, Prof. Popov str., 2, St. Petersburg, 197376, Russian Federation; email: av_leonid@yahoo.com

ISSN: 0372333X

Language of Original Document: English

Abbreviated Source Title: Taiwania

Document Type: Article

Source: Scopus

Authors with affiliations:

1. Averyanov, L.V., Komarov Botanical Institute of the Russian Academy of Sciences, Prof. Popov str., 2, St. Petersburg, 197376, Russian Federation
2. Phan, K.L., Institute of Ecology and Biological Resources, 18 Hoang Quoc Viet, Nghia Do, Cau Giay, Hanoi, Viet Nam, Center for Plant Conservation, Vietnam Union of Science and Technology Associations, 25/32/191, Lac Long Quan Rd, Nghia Do, Cau Giay District, Ha Noi, Viet Nam, Hanoi University of Science, 334 Nguyen Trai, Thanh Xuan, Hanoi, Viet Nam
3. Nguyen, T.H., Institute of Ecology and Biological Resources, 18 Hoang Quoc Viet, Nghia Do, Cau Giay, Hanoi, Viet Nam, Center for Plant Conservation, Vietnam Union of Science and Technology Associations, 25/32/191, Lac Long Quan Rd, Nghia

Do, Cau Giay District, Ha Noi, Viet Nam

4. Nguyen, S.K., Institute of Ecology and Biological Resources, 18 Hoang Quoc Viet, Nghia Do, Cau Giay, Hanoi, Viet Nam, Center for Plant Conservation, Vietnam Union of Science and Technology Associations, 25/32/191, Lac Long Quan Rd, Nghia Do, Cau Giay District, Ha Noi, Viet Nam
5. Nguyen, T.V., Institute of Ecology and Biological Resources, 18 Hoang Quoc Viet, Nghia Do, Cau Giay, Hanoi, Viet Nam, Center for Plant Conservation, Vietnam Union of Science and Technology Associations, 25/32/191, Lac Long Quan Rd, Nghia Do, Cau Giay District, Ha Noi, Viet Nam
6. Pham, T.D., Center for Plant Conservation, Vietnam Union of Science and Technology Associations, 25/32/191, Lac Long Quan Rd, Nghia Do, Cau Giay District, Ha Noi, Viet Nam

References:

1. Averyanov, L.V., Loc, P.K., Hiep, N.T., Harder, D.K., Phytogeographic review of Vietnam and adjacent areas of (2003) Eastern Indochina. Komarovia, 3, pp. 1-83
2. Dallimore, W., Jackson, A.B., Harrison, S.G., (1967) A handbook of Coniferae and Ginkgoaceae, p. 729. , 4th ed. St.Martin's Press. New York, USA
3. Decision 32. 2006. Governmental Decree No 32/2006/ND-CP date on 30 March 2006 on the Management of native, threatened, precious and rare plants and animals. Hanoi (no pagination)Farjon, A., (2005) A monograph of Cupressaceae and Sciadopitys, p. 648. , Cambridge Printing, Royal Botanic Gardens, Kew, UK
4. Fu, L.-G., Yu, Y.-F., Mill, R.R., Taxodiaceae Warming (1999) Flora of China. 4, , Wu, Z.-Y. and Peter H. Raven (eds.), Cycadaceae through Fagaceae: 54-61. Science Press, Beijing, China. Missouri Botanical Garden, St. Louis, USA
5. Ho, P.-H., (1999), p. 991. , An illustrated flora of Vietnam. 1. Nha Xuat Ban Tre, tp Ho Chi Minh. Vietnam(2001) IUCN Red List Categories: Version 3.1, , http://www.iucnredlist.org/static/categories_criteria_3_1, IUCN, Prepared by the IUCN Species Survival Commission. IUCN. Gland, Switzerland, and Cambridge, UK
6. Le, K.B., Phan, K.L., VI - Taxodiaceae Rich. - H Bt Mc (1984) Florae Taynguyenensis, p. 235. , Vin Sinh Vt Hc. H? Ni. Vietnam, in Vietnamese
7. (1907), Lecomte, M. H. and H. Humbert. (eds.), Flore G??n??rale de l'Indochine Vol. 1-7 & Supplements, Paris, FranceLi, F.-G., Xia, N.-H., Population structure and genetic diversity of an endangered species, Glyptostrobus pensilis (Cupressaceae) (2005) Bot. Bull. Acad. Sin., 46, pp. 155-162
8. Loureiro, J., (1793) Flora Cochinchinensis, p. 882. , T. 1-2. Impenfis Haude Spener, Berolini, Germany
9. Luu, N.D.T., Thomas, P.I., Conifers of Vietnam (2004) An illustrated field guide for the most important forest trees, p. 86. , Darwin Initiative, Hanoi, Vietnam
10. Nguyen, T.H., Vidal, J.E., Gymnospermae (1996) Flore du Cambodge du Laos et du Vi?tnam, p. 166. , 28. Mus. Nat. D'Hist. Natur., Paris, France
11. Nguyen, T.H., Phan, K.L., Luu, N.D.T., Thomas, P.I., Farjon, A., Averyanov, L., Regalado, J., (2004) Vietnam Conifers: Conservation Status Review 2004, p. 128. , Fauna & Flora International, Vietnam Programme, Hanoi, Vietnam
12. Phan, K.L., Species of Pinopsida in Vietnam (1984) Journ. Biol. (Hanoi), 6 (4), pp. 5-10. , (in Vietnamese)
13. Schmid, M., V??g??tation du Vietnam: Le massif sud-annamitique et les regions limitrophes (1974) ORSTOM, p. 243. , Paris, France
14. Takhtajan, A., (1978) The floristic regions of the world, p. 247. , Nauka, Leningrad, Russia, in Russian)
15. Takhtajan, A., (1986) Floristic Regions of the World. Univ., p. 522. , California Press, Berkeley, Los Angeles, London, U.S.A
16. (2004) Sourcebook of Existing and Proposed Protected Areas in Vietnam, ,

http://birdlifeindochina.org/birdlife/source_book/source_book, Tordoff, A. W., T. Q. Bao, N. D. Tu and L. M. Hung (eds.), 2 ed. Birdlife International in Indochina and the Ministry of Agriculture and Rural Development, Hanoi, Vietnam

17. Vidakovic, M., (1991) Conifers, Morphology and Variation, p. 755. , Graficki Zavod Hrvatske, Croatia
18. (1996) Vietnam Forest trees. Forest Inventory and Planning Institute, p. 788. , Vu, Van Dung (ed.), Agricultural Publishing House. Hanoi, Vietnam