

Xanthoparmelia xizangensis (J. C. Wei) Hale, a new record of lichen from India

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ABSTRACT

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Xanthoparmelia xizangensis (J. C. Wei) Hale, earlier known from China and endemic to the region, is described as new record for Indian lichen flora.

Key-words: *Xanthoparmelia xizangensis* (J. C. Wei) Hale, new record, Western Himalaya, India.

INTRODUCTION

The lichen genus *Xanthoparmelia* (Vain.) Hale is represented by 500 species. Divakar and Upreti (2005) reported occurrence of 13 species of *Xanthoparmelia* in India while Singh and Sinha (2010) mentioned the occurrence of 16 species. The Himalayan region is represented by 13 species of *Xanthoparmelia* of which the Chamoli district, situated in the Garhwal Himalaya of Uttarakhand, exhibits occurrence of 5 species. During a recent exploration of lichens in the Chamoli district, few specimens of *Xanthoparmelia* appear different from the so far known species of this genus from India and thus described here as new record of lichen for India.

MATERIAL AND METHOD

The lichen samples were identified morphologically and anatomically. Morphology was studied using a lobo Med Digi Zoom dissecting microscope for measurement of lobe shape, size and width. Anatomical details were studied with the help of a Nikon Eclipse E 400

compound microscope. All the phenolic metabolites encountered were identified by TLC methods as described by Culberson (1972) and Walker and James (1980). The chromatograms were developed in solvent system A (Toluene: 1-4 Dioxane: Acetic Acid, 180: 60: 8).

DESCRIPTION

Genus: *Xanthoparmelia* (Vain.) Hale

Xanthoparmelia xizangensis (J. C. Wei) Hale

Plate 1, figures 1-3

Xanthoparmelia xizangensis (J. C. Wei) Hale, Mycotaxon 33: 406. 1988.

Xanthoparmelia conspersa (Ehrh. ex Ach.) Hale, Phytologia 28: 465. 1974.

Description: Thallus saxicolous, foliose, loosely adnate on rock, 4-6 cm broad, dark yellow green; lobes sublinear, 0.8-1.5 mm wide, dichotomously branched, loosely divaricate imbricate, brown-rimmed at the tips; upper surface uniformly white maculate, shiny,

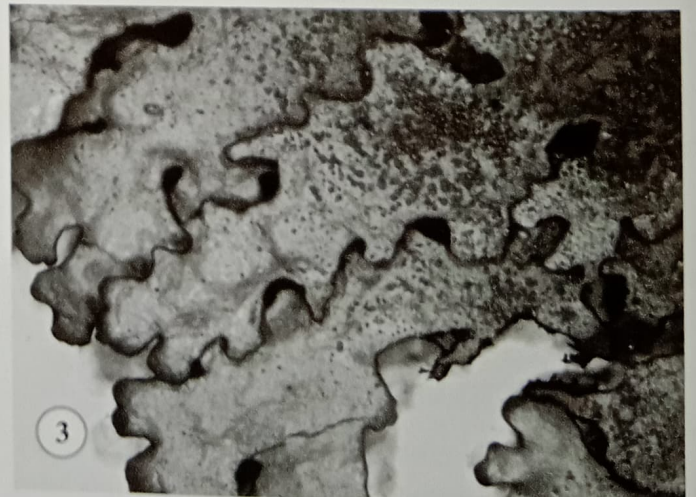
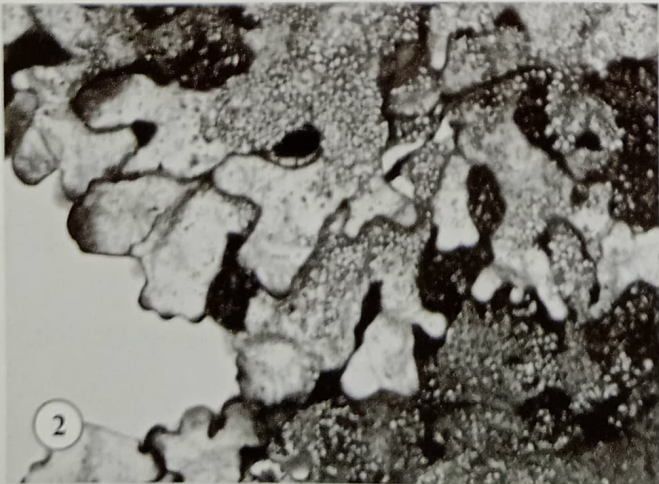
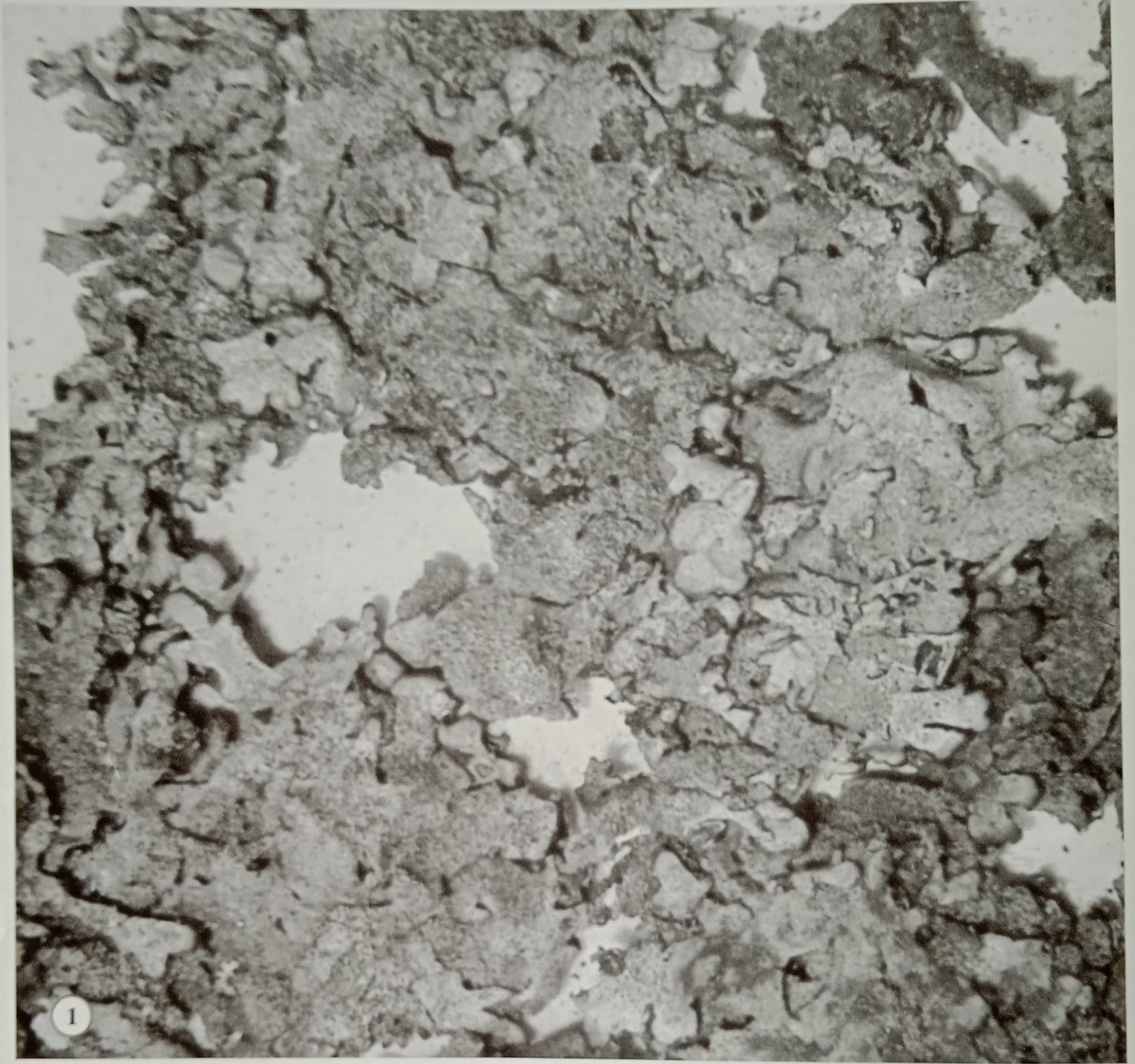


Plate 1

1. Thallus of *Xanthoparmelia xizangensis* (J. C. Wei) Hale. 2-3. Part of the thallus of *Xanthoparmelia xizangensis* (J. C. Wei) Hale., enlarged.

moderately isidiate; isidia cylindrical, 0.15-0.2 mm in diam.; 0.8 mm high, tips syncorticate, pale to brownish, sparsely branched; medulla white; lower surface plane, dark brown and weakly yellow-rimmed at the tips, blackening at the centre, sparsely to moderately rhizinate; rhizinae black, simple, 0.3-0.6 mm long. Pycnidia well developed; conidia bifusiform, 0.5 x 4-5µm. apothecia not seen.

Chemistry: Thallus K⁺ yellow- red, C⁻, KC⁻, Pd⁻, salazinic, consalazinc, and usnic acids present in TLC.

Distribution: This is a saxicolous species endemic to China (Tibet). The present study extends its distribution to Lata, Jumma and Malari localities in Nanda Devi Biosphere Reserve of Chamoli district, as a new record for Indian lichen flora.

Specimens examined: Uttarakhand, Chamoli district, Malari, alt. 3000 m, on rock, 23.06.2007, S. Rawat and D. Rawat, 07-008630 (LWG), Jumma, alt. 2800 m, on rock, 03.07.2007, S. Rawat and D. Rawat, 07-008668 (LWG), Lata, alt. 2800 m, on rock, 05.06.2008, S. Rawat and J. Rawat, 08-011258 (LWG).

Remarks: This is one of the few white-maculate species in the genus *Xanthoparmelia* with isidia. It is superficially similar to *X. tinctoria* but the latter species differs in having globular isidia.

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