Anaphalis kashmiriana P.C. Pant, R.R. Rao et G. Arti,
A New Species of Compositae from Kashmir, India

P.C. PANT, R.R. RAO and G. ARTI
aBotanical Survey of India, Dehra Dun-248195, INDIA;
bNational Botanic Research Institute, Lucknow-226001, INDIA

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A new species, Anaphalis kashmiriana P.C. Pant, R.R. Rao et Arti is described from Kashmir, India. The pollen morphology of the new species is also worked out.

The genus Anaphalis DC. with about 40 species in Europe, Asia and America is represented in India by ca 30 species. During the course of a revisionary study of the genus Anaphalis (Compositae) the authors came across an interesting specimen at BSD which could not be matched with any of the known species. Further critical study and scrutiny of all specimens at BSD, DD and CAL and the comment from Dr. C. Jeffrey on the present specimen concluded that this is a new species.

Anaphalis kashmiriana P.C. Pant, R.R. Rao et Arti, sp. nov. (Fig. 1).

Anaphalis contorta (D. Don) Hook. f. affinis sed foliis suboppositis vel alternatis, fere horizontalibus, bracteis involucralibus externis purpureis, late cordato-ovatis, laciniatis et bracteis interioribus oblongo-lanceolatis, spathulatis differt.

Erect, feebly branched herbs, up to 30 cm high. Stem sparingly striate with cottony wool. Leaves 1-5×0.3–0.8 cm, alternate, rarely subopposite at the extreme end, oblong, horizontal to the ground, 1-nerved, laxly hairy above, densely woolly beneath, obtuse at apex, amplexicaul at base. Heads ca 2 mm across in terminal, much branched corymbs. Peduncles 2 mm long, densely woolly tomentose. Involutural bracts many seriate; outermost bracts broadly ovate-cordate, densely white woolly, purplish at apex, margins usually laciniate, particularly towards the upper portion; middle bracts oblong-lanceolate, purplish tinged at either ends; innermost bracts spathulate. Marginal female florets filiform, corolla 2–3 mm long, narrowly 4-lobed; style linear. Achenes oblong, ca 0.5 mm long, pubescent. Central bisexual florets ca 2.2 mm long, 5-toothed. Pappus hairs white, minutely bristly.


Anaphalis kashmiriana closely resembles the highly polymorphic A. contorta but can be segregated as follows:

1. Leaves linear, up to 4 mm broad; outer involucral bracts white glistening, ovate-lanceolate, scarious, margin undulate or entire; inner bracts narrowly linear-oblong; pollen exine psilate ....A. contorta

1. Leaves linear – oblong, up to 10 mm broad; outer involucral bracts purplish at apex, ovate-cordate, not scarious, margin laciniate, inner bracts lanceolate-spathulate; pollen exine punctate .............
Fig. 2. Pollen grains of *Anaphalis kashmiriana* (A–B) and *A. contorta* (C–D). Bar indicates 2 µm.

................................. *A. kashmiriana*

**Pollen Morphology**

*Anaphalis contorta* (D. Don) Hook. f. (Fig. 2, C, D)

Grains 3-zonocolporate, colpi 14×1.5 µm (13–15×1.2 µm), endocolpium circular, 2–4×2–5 µm. Exine 1 µm thick, surface spinulate, spines closely packed, 5–6 per mesocolpium, 0.75 µm long, root zone not well demarcated from column zone, semiexposed, inter spinular curve shallow trough shaped, interspinular area psilate; cavum indistinct; columella indistinct; shape subspheroidal, 19×20 µm (range 15–23×17–23 µm) AMB circular.

*Anaphalis kashmiriana* P.C. Pant, R.R. Rao et Arti (Fig. 2, A, B)

Grains 3-zonocolporate, colpi 9 µm (8–9 µm), endocolpium circular. Exine 1.5 µm thick, surface spinate, spines distant, 4 spines per mesocolpium, 1 µm long, root zone exposed, spinal column tapering, narrow. Interspinal curve broad ‘V’ shaped, interspinal area punctate, punctae extend up to the root zone, columella faint; thin cavum present. Grain size 12 µm diam.; shape spheroidal, AMB circular.

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キク科ハハコグサ属はインドに約30種あり、この再検討を進めているが、カシミール地方で T. A. Rao が採集した個体は新種と断定され、標記の学名を与え発表した。この種は *A. contorta* (D. Don) Hook. f. に近いが、葉が線形から長円形、幅10mmで、総苞外片は膜質ではなく、先が紫色を帯び、内片はさじ状披針形で、花粉のエキシングが psilate であり、葉が線形、幅 4 mm 以下で、総苞外片は膜質で、先が硬白色、内片は線形で、エキシングが punctate となる後者と異なる。