A most reasonable solution of this homonymy case is now permitted by a new regulation of the 4th edition of the International Code of Zoological Nomenclature (1999). Article 23.9.5 states: "When an author discovers that a species-group name in use is a junior primary homonym [Art. 53.3] of another species-group name also in use, but the names apply to taxa not considered congeneric after 1899, the author must not automatically replace the junior homonym; the case should be referred to the Commission for a ruling under plenary power and meanwhile prevailing usage of both names is to be maintained." A full applicability of this article is given by the fact that *Formica picea* LEACH, 1825 is named *Camponotus piceus* (LEACH, 1825) since 1861 and will never be returned to *Formica* by any existing or future taxonomist because it belongs to a widely distant clade with a fundamentally deviating morphology. The reasonable decision of myrmecologists such as Pisarski, Dlussky, or Kutter not to replace the name *F. picea* NYLANDER finally became justified by the ICZN.

According to both genetic evidence (GOROPASHNAYA 2003) and the morphological investigations presented here, the Palaearctic complex of all the taxa attributed by BOLTON (1995) to *Formica candida* SMITH, 1878, consists of two separable entities at least. Redescription and neotype fixation for the Central Asian-Tibetan species *Formica candida* and redescription and lectotype fixation of the European-West Siberian Black Bog Ant, *Formica picea* NYLANDER, 1846, as performed here are hoped to be first steps towards taxonomic determinism in this species complex.

Material and methods

If not explicitly stated otherwise, all material used in this study is stored in the Museum für Naturkunde Görlitz. A total of 105 nest samples with 264 worker specimens belonging to the five related species *Formica picea* NYLANDER, 1846, *F. candida* SMITH, 1878, *F. gagatoides* RUZSKY, 1904, *F. kozlovi* DLUSSKY, 1965, and *F. gagates* LATREILLE, 1798 was morphometrically investigated. Details on the origin and number of specimens are given in the sections treating the species.

All measurements were made on mounted and dried specimens using a goniometer-type pin-holding device, permitting endless rotations around X, Y, and Z axes. A Wild M10 stereomicroscope equipped with a 1.6 x planapochromatic objective was used at magnifications of 50 - 320 x. A mean measuring error of ± 1 µm is given for small and well-defined structures, such as hair length, but may reach 4 µm for measures > 1700 µm with difficult positioning and high influence of air humidity. To avoid rounding errors, all measurements were recorded in µm even for characters for which a precision of ± 1 µm is impossible. Error sources of stereomicroscopic measuring in general and of the particular system used here are properly discussed elsewhere (SEIFERT 2002).

Setae, also called pilosity or simply "hairs", are differentiated from pubescence hairs in having a much larger diameter – usually 4 - 8 µm in setae and 1 - 2 µm in pubescence. All seta counts (acronyms beginning with "n") are restricted to standing setae projecting > 10 µm from cuticular surface as seen in a profile view specifically defined.

Definition of numeric characters:

CL maximum cephalic length in median line; the head must be carefully tilted to the position with the true maximum. Excavations of occiput and/or clypeus reduce CL.

CS cephalic size; the arithmetic mean of CL and CW, used as a less variable indicator of body size.

CW maximum cephalic width; this is either across, behind, or before the eyes.

EYE eye-size: the arithmetic mean of the large (EL) and small diameter (EW) of the elliptic compound eye.

GHL length of longest seta on dorsal plane of first gaster tergite excluding the row of setae immediately anterior of the hind tergite margin.

nGU unilateral number of setae protruding more than 10 µm from cuticular surface of the underside of head ("gula") as visible in lateral view.

nHFFL arithmetic mean of the number of setae protruding more than 10 µm from cuticular surface of the flexor profile of hind femora.

nMN unilateral number of setae on mesonotum protruding more than 10 µm from cuticular surface.

nOCC with the head in measuring position for CL, unilateral number of setae protruding more than 10 µm from occipital margin and the head sides anterior to level of anterior eye margin.

nPE unilateral number of setae protruding more than 10 µm from margin of petiole scale dorsal of spiracle in caudal or frontal viewing position.

nPN unilateral number of setae protruding more than 10 µm from cuticular surface of pronotum.

nPR unilateral number of setae protruding more than 10 µm from cuticular surface on propodeum and lateral metapleuron (excluding setae fringing the metapleural gland orifice and those on ventrolateral edge of metapleuron).

PEW maximum width of petiole.

RipD average distance of transversal microripples on dorsal plane of first gaster tergite. At least 3 countings along a 90 µm distance on different surface spots are averaged – in species of the *F. candida* complex 5 - 8 coun-