



Latin abbreviations and words used in scale insect literature (Hemiptera: Sternorrhyncha: Coccoidea)

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Latin abbreviations and words have been used in the zoological literature since Linnaeus (1758), although some are now rare but were in common usage in the 18th and 19th centuries. The following list of Latin abbreviations and words is prepared to help students of scale insects who are not acquainted with Latin and those who may be just beginning to learn about the study of scale insects with its vast literature. There are many more abbreviations in zoological literature but the list concentrates on those used in scale insect literature.

Latin abbreviations and words are reported in table 1. This gives the abbreviation or word first, followed by the Latin meaning in full, then the English meaning and an example taken from scale insect literature. The full reference of the authors cited in the “example” can be easily found in Ben-Dov *et al.* (2013). When there are two letters or two words, some authors prefer to reverse them. Referring to the section “Glossary” of the International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature, 1999) can also help with the meaning of some other Latin words used in systematics.

This list is the third and last of a series of papers on Latin or Greek used in scale insect literature. For some Latin and Greek names see Williams (2011), and for simple rules on Latin grammar see Pellizzari & Williams (2013).

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TABLE 1. Latin abbreviations and words

Abbreviation	Full Latin word	Meaning	Example
auct.	<i>auctorium</i>	of authors: it means that the species name is used in the sense of a number of subsequent authors in a way that differs from the original or established definition	“ <i>Diaspis betulae</i> Baerensprung (auct.)”: name used by several authors, but a synonym of <i>Epidiaspis leperii</i> Signoret.
ca.	<i>circa</i>	about	(cf. p.229) = compare at page 229; (cf. Bachman, 1952)
cf.	<i>confer</i>	compare	= compare in the paper by Bachman, 1952
<i>cf. infra</i>	<i>confer infra</i>	compare below: compare with something stated some lines below	Balachowsky 1954, 278: “Puparium inconnu, species... parthénogénétique (Ferris) (<i>cf. infra</i>)”
<i>cf. supra</i>	<i>confer supra</i>	compare above: compare with something stated some lines before	Balachowsky 1954, 214: “Caractères généraux identiques... pour le genre (<i>cf. supra</i>)”
cit.	<i>citatus</i>	cited	
coll.	<i>collegit</i>	he or she collected	Pellizzari & Hodgson 2007, 3: “Holotype...ex leaves of <i>Agave americana</i> , P. Fontana coll.” = specimen collected by P. Fontana
comb. n. or comb. nov. (usually in bold)	<i>combinatio nova</i>	new combination: used when a species is transferred from one genus to another	De Lotto 1977, 19: “ <i>Allococcus elisabethae</i> (Brain) comb. nov. ” = the species was first described by Brain as <i>Pseudococcus elisabethae</i>
<i>conf.</i>	<i>confer</i>	compare	
del.	<i>delineavit</i>	he or she drew or illustrated	Balachowsky 1935, 123: Balachowsky del. = drawn by Balachowsky
<i>derivatio nominis</i>		origin of the name, etymology	Pellizzari & Fontana 2002, 203: “ <i>Lecanopsis marottai</i> sp.n. <i>Derivatio nominis</i> : the species is dedicated...to S. Marotta.”
det.	<i>determinavit</i>	he or she identified	
e.g.	<i>exempli gratia</i>	for example	
<i>et al.</i>	<i>et alii</i> <i>et aliae</i> <i>et alia</i>	and others: used for more than two authors when quoting a reference in the text. <i>et alii</i> = and others (gender masculine), <i>et aliae</i> = and others (gender feminine), <i>et alia</i> = and other things, (gender neuter). Mixed-gender groups would use <i>et alii</i> .	(Takagi <i>et al.</i> , 1988) or Takagi <i>et al.</i> (1988), instead of Takagi, Pong & Ghee (1988)
f. or fig.	<i>figura</i>	figure	
gen. n. or gen. nov. (usually in bold)	<i>genus novus</i>	new genus	Balachowsky 1953, 19: <i>Benaparlatoria</i> Gen. Nov.
i.e.	<i>id est</i>	that is	
<i>Id.</i>	<i>idem</i>	the same: in references when referring to the same author or in captions when referring to the same species	Balachowsky 1954, 39: “Planche 2 <i>Lepidosaphes ulmi</i> L. 2. <i>Id.</i> , pygidium; 3. <i>Id.</i> , marge pygidiale...”
in. litt.	<i>in litteris</i>	in correspondence: when citing unpublished information, given to the author by letter or message	Pellizzari & Porcelli 2013, 209: “(Germain, 2005, <i>in litteris</i>).”

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TABLE 1. (Continued)

Abbreviation	Full Latin word	Meaning	Example
<i>incertae sedis</i> (<i>genus</i> or <i>species incertae sedis</i>): <i>lapsus</i> or more correctly <i>lapsus calami</i>		of uncertain position: usually when neither can be placed correctly in a tribe or subfamily. literally “slip of the pen”, error, usually a misspelling of a name	Zhang, Wang & Chen 1993, 173: “ <i>Pseudaulacaspis pentagona</i> ” = <i>lapsus calami</i> , as the correct species name is <i>pentagona</i>
l.c. or loc.cit.	<i>loco citato</i>	at the place cited: it is used when the reference is not only to the work immediately preceding, but also refers to the same page.	Targioni Tozzetti 1868, 722: “Sp.1. <i>Orthezia Characius</i> Bosc., loc. cit.”
leg.	<i>legit</i>	he or she collected	De Lotto, 1958, 105: “(Brain, l.c.) Balachowsky, 1954, 80: “(Koroneos <i>leg.</i>)” = Koroneos collected the specimen
mihi	<i>mihi</i>	of me or to me: usually referring to a taxon described in a previous work by the same author of the work where <i>mihi</i> is used. Often used in articles published in the 18th and 19th centuries	Boratynsky & Williams, 1964, 107: “ <i>Lecanium corni-crudum</i> Green, 1930, nec Green, 1917” Tanaka, 2012: “ <i>Pulvinaria citricola</i> Kuwana, 1914 (nec Kuwana, 1909).”
nec	<i>nec</i>	Not: used to indicate a misapplied name.	
N.B.	<i>nota bene</i>	note well: often used at the beginning of a remark	
Nob.	<i>nobis</i>	of us or to us: usually with the same value as <i>mihi</i>	Targioni Tozzetti, 1868, 725: “ <i>Dactylopius longispinus</i> nob.” = Targioni Tozzetti attributes to himself the description of the species <i>D. longispinus</i> ; described in 1867.
<i>nomen dubium</i> (plural <i>nomina dubia</i>) n. n. or nom. nov. (usually written in bold)	<i>nomen novum</i>	a doubtful name: a name of unknown or doubtful application new name: a name that replaces a name already established	De Lotto, 1978, 138: “ <i>Ceroplastes fumidus</i> – nomen novum ” = A replacement name for <i>Ceroplastes simplex</i> De Lotto, homonym of <i>Ceroplastes simplex</i> Hempel. Williams & Ben-Dov 2009, 16: “ <i>Coccus citri</i> Gmelin, P.F., 1766: 41. <i>Nomen nudum</i> ,”
<i>nom. nud.</i> (plural <i>nomina nuda</i>) <i>nom. cons.</i>	<i>nomen nudum</i> <i>nomen</i> <i>conservandum</i>	literally “naked name”: name without a description, an invalid name literally “a name to be conserved”; in zoology “conserved name” is a name to conserve. forgotten name: a name unused since 1899	Pellizzari & Fontana 2002, 136: “ <i>Rhizobium</i> Targioni Tozzetti, 1867: <i>nomen oblitum</i> .”
<i>nomen oblitum</i> (plural <i>nomina oblita</i> .) <i>nomen protectum</i>		protected name: a name which has precedence over its unused senior synonym relegated to the status of <i>nomen oblitum</i>	

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TABLE 1. (Continued)

Abbreviation	Full Latin word	Meaning	Example
op. cit.	<i>opere citato</i>	"in the work cited": it is used to refer the reader to a previously cited work, standing in for repetition of the full title of the work.	Targioni Tozzetti 1879, 396: " <i>Chionaspis evonymi</i> Comst. op. cit."
<i>partim</i>		a part	Kawecki, 1971, 255: " <i>Lecanium franconicum</i> ; Sulc, 1932 (partim)" = only a part of the specimens tributed by Sulc, 1932 to <i>L. franconicum</i> Lindinger belong to this species.
q.v.	<i>quod vide</i>	which see: when referring to something in the same text	
<i>sensu</i>		according to, in the sense of; it refers to the use of a name by an author in a sense different from that of other authors	Hodgson & Foldi 2006: A review of the Margarodidae <i>sensu</i> Morrison 1928
s.l.	<i>sensu lato</i>	in a broad sense	Hodgson & Foldi 2006, 9: "The Margarodidae s.l. currently includes about 450 species"
s. str. or s. s.	<i>sensu stricto</i>	in a strict sense; generally referring to the nominal taxon in the narrow sense of its subordinate nomenclotypical taxon	Gilomee 2001, 86: " <i>Asterolecanium machili</i> . in the sense of Borchsenius... belongs to <i>Asterolecanium sensu stricto</i> "
spec. nov. or sp. n. (usually in bold)	<i>species nova</i>	new species	De Lotto, 1977, 16: " <i>Alltococcus confusus</i> spec. nov."
<i>species inquirenda</i>		Literally "a species to be looked into", a species incompletely defined that requires further clarification	Pellizzari & Fontana 2002, 135: " <i>L. rhizophila</i>remains the type species of the genus even if its identity...is unclear (<i>species inquirenda</i>)."
<i>stat. nov.</i>	<i>status novus</i>	new status	
stat. res.	<i>status resurrectus</i>	resurrected status: used when a taxon, previously considered as a junior synonym, is newly considered a valid taxon.	Tanaka, 2012, 7: " <i>Pulvinaria nipponica</i> Lindinger, 1933, stat. res."
stat. rev.	<i>status revisus</i>	revised status: is used with the same meaning of stat. res.	Hodgson 2012, 58: <i>Ceroplastes luteolus</i> De Lotto stat. rev. = the species <i>C. luteolus</i> was synonymised with <i>C. brevicauda</i>
syn. n. or syn. nov. , usually written in bold	<i>synonymum novum</i>	new synonym	Hodgson 2012, 81: " <i>Ceroplastes vinsonioides</i> Newstead, 1911: 96. Syn. nov. " = the species <i>C. vinsonioides</i> is synonymised with <i>C. personatus</i> Newstead, 1898.
var.	<i>varietas</i>	variety	Maskell 1898, 224: " <i>Aspidiotus secretus</i> Cockerell, var. <i>lobulatus</i> "
var. nov.	<i>varietas nova</i>	new variety	Maskell 1898, 224: " <i>Aspidiotus secretus</i> Cockerell, var. <i>lobulatus</i> , var. nov."
v.	<i>vide</i>	see	Balachowsky 1954: 65: " <i>Lepidosaphes conchiformis</i> Gmelin (v. forma <i>minima</i> Newst.)" = see the forma <i>minima</i>
viz.	" <i>videre licet</i> " or <i>videlicet</i>	literally "it is permitted to see": that is, namely, it may be seen; evidently	