

Tribune

NOTES ON NOMENCLATURE OF PLANT NEMATODES

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A number of violations of the rules of the International Code of Zoological Nomenclature (ICZN) came to my attention during the update of the book *Nomenclatorial Compilation of Plant and Soil Nematodes* (Tarjan & Hopper, 1974), and its two supplements (Hopper & Tarjan, 1977; 1978).

Because the updated data on nematode nomenclature will eventually be distributed in the form of a computerized data file, the corrections of these infractions have to be published first in a printed form (Art. 8, ICZN).

Names not available

The deposition of a thesis in a library does not constitute a publication. The mention of a new name at a meeting does not make it available (Art. 9).

Abstracts of theses printed in *Dissertation Abstracts International*, and abstracts of communications in journals or books are published according to Article 8. However, the new names they include are available only if the abstract complies with the requirements of Art. 13.

Table 1 presents a list of names that cannot be accepted because of Articles 9 and 13 (some names were made available by a subsequent correct publication). In addition to Table 1: *Tylenchus vividus*, *T. varicaudatus*, *T. serenus*, *Coslenchus temperatus*, *Tenuinema tenuum*, *Malenchus microlobatus*, *M. praecisus*, *M. kasolensis*, *Neottolenchus clarus*, *N. unicus*, *Basiria abrupta*, *B. simulata*, *Nothotylenchus strictus*, *Boleodorus vincae*, *Basilophora constricta*, *B. filicaudata*, *B. delicata*, *Sakia attenuata*, *S. bella*, *Tylenchorhynchus caricae*, *T. sulcaticeps*, *T. valerianae*, *T. stabilis*, *T. imitans*, *Quinisulcius similis*, *Merlinius austerus*, *Nagelus magnus*, *Telotylenchus sparsus*, *Helicotylenchus certus*, *Rotylenchus julaharensis*, *R. yarikahensis*, *Orientalus cognatus*, *O. populus*, *O. prominens*, *Pratylenchus himalayaensis*, *P. angelicae*, *P. menthae*, *Hirschmanniella augusta*, *H. phantastica*, *Macroposthonia vigens*, *M. lanatae*, *M. efficiens*, *Nothocriconema indolens*,

Ogma modestum, *Hemicyclophora chathaensis* are not available in the thesis of Kapoor (1982).

This enumeration is not limitative and more non-available names may have been proposed in other theses that I failed to locate.

Correct spelling of names

The original spelling of a name is to be accepted as the correct original spelling, unless it contravenes some provision of Articles 26 to 30 and 32.

AGREEMENT IN GENDER

Taylor (1936) treated *Criconemoides* as a neuter name, whereas it is a masculine name (Art. 30, a, ii) as pointed out by Loof (1964). The new names he proposed, when adjectives, must be corrected;

Criconemoides annulatum to *C. annulatus*;

Criconemoides axeste to *C. axestis*;

Criconemoides morgense to *C. morgensis*; etc.

Ogma is formed on *ogmos*, a masculine Greek word, feminized when latinized with a change of termination (Art. 30, a, i, 3).

Ogma coronatum is corrected to *O. coronata*

O. simlaense to *O. simlaensis*, etc.

Because a genus name takes the gender appropriate to its termination (Art. 30, a, i, 4), *Thecavermiculatus* is a masculine genus name. *T. crassicrustata* is corrected to *T. crassicrustatus*. The name of the type species of the genus, *T. gracilancea* is correct (from *lancea*, light, spear, a noun).

Other specific names corrected because of errors in gender include :

Allantonema bathycapsulata to *A. bathycapsulatum*

Criconema elegantula to *C. elegantulum*

Criconema komabaeensis to *C. komabaeense*

Criconema proclivis to *C. proclive*

Nothocriconema montanus to *N. montanum*

Iotonchium obtusicaudatus to *I. obtusicaudatum*

Table 1

List of names non-available because of Articles 9 and 13, eventually with correct authority for the names that later become available

NAMES NON-AVAILABLE	AVAILABLE NAMES
<i>Tylenchus oryzae</i> Soltwedel, 1889	<i>T. oryzae</i> van Breda de Haan, 1902
<i>Pratylenchus rhizasinus</i> Sher, 1948	—
<i>P. thornei</i> Sher, 1948	<i>P. thornei</i> Sher & Allen, 1953
<i>Radopholus paludosus</i> Whitlock, 1957	—
<i>Helicotylenchus digonicus</i> Perry, 1959	<i>H. digonicus</i> , Perry in Perry, Darling & Thorne, 1959
<i>H. microlobus</i> Perry, 1959	<i>H. microlobus</i> , Perry in Perry, Darling & Thorne, 1959
<i>H. pumilus</i> Perry, 1959	<i>H. pumilus</i> , Perry in Perry, Darling & Thorne, 1959
<i>H. platyurus</i> Perry, 1959	<i>H. platyurus</i> , Perry in Perry, Darling & Thorne, 1959
<i>Xiphinema paulum</i> Bravo-Lima, 1965	—
<i>X. griphum</i> Bravo-Lima, 1965	—
<i>X. mediterraneum</i> Bravo-Lima, 1965	<i>X. mediterraneum</i> Martelli & Lamberti, 1967
<i>X. latinum</i> Bravo-Lima, 1965	—
<i>Macroposthonia amorphus</i> De Grisse & Loof, 1965	<i>Criconemoides amorphus</i> De Grisse, 1967
<i>Chitinotylenchoides mediterraneensis</i> Arias & Jiménez-Millan 1965; 1968	<i>C. mediterraneensis</i> Arias & Jiménez-Millan, 1973
<i>Aphelenchoides longiuterualis</i> Eroshenko, 1967	—
<i>Atalodera ucri</i> Wouts, 1970	<i>A. ucri</i> Wouts & Sher, 1971
<i>Sarisodera hydrophila</i> Wouts, 1970	<i>S. hydrophila</i> Wouts & Sher, 1971
<i>Trichodorus dilatatus</i> Rodriguez 1976; 1977	<i>T. dilatatus</i> Rodriguez & Bell, 1978
<i>T. intermedius</i> Rodriguez, 1976; 1977	<i>T. intermedius</i> Rodriguez & Bell, 1978
<i>Atlantadorus grandis</i> Rodriguez, 1976; 1977	<i>Paratrachodorus (Atlantadorus) grandis</i> Rodriguez & Bell, 1978
<i>Nanidorus westindicus</i> Rodriguez, 1976; 1977	<i>Paratrachodorus (Nanidorus) westindicus</i> Rodriguez, Sher & Siddiqi, 1978
<i>Allotrichodorus vangundyi</i> Rodriguez, 1976; 1977	<i>Monotrichodorus vangundyi</i> Rodriguez, Sher & Siddiqi, 1978
<i>Vadorus bullatus</i> Rodriguez, 1976; 1977	—
<i>V. varians</i> Rodriguez, 1976; 1977	—
<i>Macroposthonia similicrenata</i> Cid del Prado, 1976	<i>M. similicrenata</i> Cid del Prado, 1978
<i>M. caballeroi</i> Cid del Prado, 1976	<i>M. caballeroi</i> Cid del Prado, 1978
<i>M. sosamossi</i> Cid del Prado, 1976	<i>M. sosamossi</i> Cid del Prado, 1978
<i>Meloidogyne californiensis</i> Abdel-Rahman, 1981	
<i>Hirschmanniella pomponiensis</i> Abdel-Rahman, 1981	
<i>Radopholus citrophilus</i> Huettel, 1982	<i>R. citrophilus</i> Huettel, Dickson & Kaplan, 1984

Scutellonema magna to *S. magnum*
Scutellonema orientale to *S. orientale*
Sphaeronema cornubiensis to *S. cornubiense*
Helicotylenchus unicum to *H. unicus*
Paratylenchus longistylosa to *P. longistylosus*

SPECIFIC NAMES DERIVED FROM HOST NAMES

A parasite named after its hosts should be given the

specific (not the generic) name of its host; this name should be treated as a substantive in the genitive case (Article 11, g, 4). For example, *Hemicaloosia americana* Ray & Das, 1978 is a species from India named after its host: *Agave americana*. *H. americana* is to be spelled *H. americanae*.

Many authors use the generic name of the host. It would not serve the stability of nomenclature to change these names and they will be accepted as proposed.

SPECIFIC NAMES DERIVED FROM GEOGRAPHICAL NAMES

Nothocriconema sanctus-francisci van den Berg & Heyns, 1977, must be corrected by deletion of a hyphen (Art. 26), and should be written in the genitive case as *N. sanctifrancisci*.

Scutellonema imphalus Sultan & Jairajpuri, 1979, from the town of Imphal, India, is treated as an adjective. It should be spelled *S. imphalum*.

SPECIFIC NAMES FORMED FROM MODERN PERSONAL NAMES

Aphelenchoides franklini Singh, 1969, from the name of Dr Mary Franklin, is corrected to *A. franklinae*. *Cosaglenchus rafiqus* Siddiqui & Khan, 1983 is corrected to *C. rafiqi* (Recommendation 31 A; see also D III).

ERRORS IN TARJAN AND HOPPER'S BOOK

The specific names listed in Tarjan and Hopper (1974) are sometimes spelled with an ending different from that in the original publication. These discrepancies occurred when a taxon is better known in a genus different from the original genus, and with a different gender.

For example the species named *Tylenchus balsamophilus* Throne, 1926, in the original description was spelled *T. balsamophila* in Tarjan and Hopper's book, probably because it is now *Anguina balsamophila*. In the computerized datafile, the spelling has been reverted to that of the original author.

Other typographical errors in Tarjan and Hopper (1974) include :

Anguillonema erenati for *A. crenati*.

Aphelenchoides eradicatus for *A. eradicitus*

These incorrect subsequent spellings have no status in nomenclature (Art. 33, b).

Another incorrect subsequent spelling was made when Bajaj and Bhatti (1979) transferred *Basiroides longimatricalis* Kazachenko, 1975 to *Basiria* under the specific name *Basiria leptolongimatricalis*. The correct new combination is *Basiria longimatricalis* (Kazachenko) Bajaj & Bhatti.

INCORRECT ORIGINAL SPELLING

The word « *philus* » was misspelled in *Criconemoides cocophilus*. Four species names were formed with the word « areolated » (with areolae in the lateral field) misspelled « aerolated ». These inadvertent errors must be corrected without change of authorship (Art. 33, a, i) : *Criconemoides cocophilus* Loos, 1949; *Telotylenchus areolatus* Baqri & Jairajpuri, 1969; *Tylenchorhynchus areolatus* Tobar-Jiménez, 1970; *Tylenchorhynchus areolatus* Khan & Nanjappa, 1972 (= *T. nordiensis* Khan & Nanjappa 1974); *Helicotylenchus areolatus* van den Berg & Heyns, 1975.

MISCELLANEOUS

- *cola*. This word is either an adjective (*colus, cola, colum*, living among) or a noun (*cola*, inhabitant of). The decision of the original author, or the evidence of usage, must be accepted in deciding whether a species name ending with *cola* is a noun or an adjective (see also art. 30, i).
- *philus, phila, philum* is an adjective and must agree with the gender of the generic name.
- *cauda*, tail is a noun (example : *Tylenchorhynchus magnicauda*). *Helicotylenchus hoplocaudus* is corrected to *H. hoplocauda*; *Laimaphelenchus pannocaudus* to *L. pannocauda*. *Caudatus* is an adjective formed from *cauda* and must agree with the gender of the generic name.
- *urus* from a Greek feminine word « *ura* », tail, has been sometimes latinized into *urus*, a masculine noun. When *Rotylenchus brachyurus* was transferred to *Scutellonema*, the specific names becomes *S. brachyurus*, not « *Scutellonema brachyurum* ». Other specific names have kept the feminine gender for the noun « *ura* » : *Anguillulina macrura* Goodey, 1932, that later became *Merlinius macrura*.
- *profundus, -a, -um*, is an adjective but *profundorum* is a noun in the genitive case. *Dolichodorus profundorum* is correct.

New combinations made by synonymization

Tarjan and Hopper (1974) accepted as new combinations only species names actually published in combination with a genus name. When an author listed a species under its old name as a synonym of a species in a different genus, Tarjan and Hopper did not credit him as the author of a new combination. These authors based this policy on the interpretation of Article 11, g, ii : a species name must be published in combination with a genus name.

In fact, Article 11, g, ii is irrelevant in this case because it refers to the availability of the specific name when originally proposed (Penrose, *in litt.*).

In the computerized data file, new combinations will be credited to the authors of the synonymization.

Infrasubspecific names

NAMES PROPOSED BEFORE 1961

Article 46 states that a name originally proposed as either a species or a subspecies is available with the same author and date in the other category (subspecies or species accordingly).

For example, *Heterodera schachtii* var. *avenae* Wollenweber, 1924, proposed as a variety before 1961 should be interpreted as a subspecies : *Heterodera schachtii avenae* Wollenweber, 1924 (art. 45, e, i).

Because of Art. 46, the name *avenae* is also available at the specific rank as *Heterodera avenae* Wollenweber, 1924. Even if it is Filip'ev, 1934 who first used this latter combination, it is wrong to cite : « *Heterodera avenae* Filip'ev, 1934 » or even « *Heterodera avenae* (Wollenweber 1924) Filip'ev, 1934 ».

Conversely, *Tylenchus africanus* Micoletzky, 1916 was reduced to subspecific rank by Micoletzky, 1922 but the correct authority is *Tylenchus robustus africanus* Micoletzky, 1916 and not « *Tylenchus robustus africanus* (Micoletzky 1916) Micoletzky, 1922 ».

Some authors proposed quadrimina by splitting a subspecies into varieties or forms. Even if proposed before 1961 such names are clearly of infrasubspecific rank and are not available.

The variety and form names *magnus*, *parvus*, *gracilis* and *informis* proposed by Micoletzky (1922) for *Aphelenchus parietinus microtubifer* and *A. parietinus tubifer* are not available.

In *Tylenchorhynchus robustus* var. *pseudorobustus* f. *brasiliensis* proposed by Rahm (1928) the name *brasiliensis* is not available.

NAMES PROPOSED AFTER 1960

Paratylenchus nanus var. *bicaudatus* Gubina, 1973 and *Aphelenchus avenae* f. *bicaudata* Adilova, 1973 are not available (Art. 45, e, ii and c).

Nominate subspecies

The subspecies that contains the type-specimen of a subdivided species bears the same name as the species (Art. 57, a).

Criconema cobbi (Micoletzky 1925) Taylor, 1936 was split by De Coninck (1945) into three forms (to be interpreted as three subspecies, see Art. 45, e, i) : *C. cobbi typica*. *C. cobbi duplex*. *C. cobbi multiplex*. According to Art. 47, a, the subspecies *Criconema cobbi typica* is renamed *Criconema cobbi cobbi* (Micoletzky 1925) Taylor, 1936 (see Art. 46 for the correct authority for this subspecies). De Coninck (1945) remains the authority of the other two subspecific names.

Fuchs (1915) proposed a new species *Tylenchus contortus* with three subspecies : *T. contortus amitini*. *T. contortus cembraei*. *T. contortus typographi*. Acting as first reviser in the sense of Article 24, I choose *T. contortus typographi* as the name of the nominotypical subspecies. Its name is changed to *T. contortus contortus* Fuchs, 1915. The name and authority of the other two subspecies and of additional subspecies within *T. contortus* proposed by Fuchs (1929) remain unchanged.

Fuchs (1929) proposed the new species *Tylenchus sulphureus* as four subspecies (*piceae*, *piniphili*, *notati*, *pini*). Acting as first reviser, I choose *T. sulphureus piceae* to be here renamed *T. sulphureus sulphureus* Fuchs, 1929.

Fuchs (1930) proposed the new species *Parasitaphelenchus hylastophilus* as two forms : *cunicularii* and *ateri*. *P. hylastophilus cunicularii* is here renamed *P. hylastophilus hylastophilus* Fuchs, 1930. The same author also proposed *P. pissodis piceae* and *P. pissodis notati*. *P. pissodis piceae* is here renamed *P. pissodis pissodis* Fuchs, 1930.

Micoletzky, 1922 proposed *Aphelenchus* (*Paraphelenchus*) *pseudoparietinus* as two varieties : *microtubifer* and *tubifer*. *A. (Paraphelenchus) pseudoparietinus microtubifer* is here renamed *Aphelenchus (Paraphelenchus) pseudoparietinus pseudoparietinus* Micoletzky, 1922.

Homonymy

Tylenchus robustus var. *exiguus* Kreis, 1924 (also available as *T. robustus exiguus* Kreis, 1924 and as *T. exiguus* Kreis, 1924) a junior primary homonym of *Tylenchus exiguus* de Man, 1876, is here rejected and replaced by *Tylenchus kreisi* nomen novum.

Tylenchus davainei var. *gracilis* Rahm, 1928, a junior primary homonym of *Tylenchus gracilis* de Man, 1880, is here replaced by *Tylenchus rahmi* nomen novum.

Tylenchus (Chitinotylenchus) coffeae var. *brevicauda* Rahm, 1928 (now in *Pratylenchus*), a junior primary homonym of *Tylenchus brevicauda* Micoletzky, 1925 (now in *Ditylenchus*) (see Art. 57, a), is here rejected and replaced by *Pratylenchus kolourus* nomen novum (*kolos*, Gr., shortened; *uros*, Gr., tail, masculine noun).

Anguillulina (Tylenchus) aberrans Altherr, 1952, a junior primary homonym of *Anguillulina aberrans* Thorne, 1935, now in the genus *Tylenchus*, is here rejected and replaced by *Tylenchus altherri* nomen novum.

When another species, *Psilenchus aberrans* Thorne, 1949 was transferred to *Tylenchus* as *T. (Filenchus) aberrans* (Thorne, 1949) Goodey, 1963, a secondary homonymy appeared between this species and *T. (Lelenchus) aberrans* (Altherr, 1952) Andr assy, 1954. A new name, *neoaberrans*, was proposed by Goodey (1963) for *T. (Filenchus) aberrans* (Thorne 1949). In fact, Thorne's species was senior to Altherr's, because what counts is the date when the specific name is originally proposed. Altherr's specific name should have been replaced, not Thorne's.

With the replacement of *T. (L.) aberrans* (Altherr) by *T. altherri* nomen novum, the secondary homonymy of this species with *T. (F.) aberrans* (Thorne) no longer exists. In addition, Thorne's species was later transferred to *Basiria*, which also breaks the homonymy (see Art. 59, b, ii). In conclusion, the correct names of the three species are :

* *Nacobbus aberrans* (Thorne, 1935) Thorne & Allen, 1944

= *Anguillulina aberrans* Thorne, 1935

* *Basiria aberrans* (Thorne, 1949) Siddiqi, 1963

= *Tylenchus (Filenchus) neoberrans* Goodey, 1963
 = *Psilenchus aberrans* Thorne, 1949

* *Tylenchus altherri* nom. nov.

= *Anguillulina (Tylenchus) aberrans* Altherr, 1952.

Tylenchus (Aglenchus) parvus Siddiqi, 1963 is a junior primary homonym of *Tylenchus filiformis* f. *parvus* Micoletzky, 1922. Golden (1971) considered *T. (A.) parvus* Siddiqi and *T. (Ottolenchus) equisetus* Husain & Khan, 1967 to be synonyms. *Tylenchus (Aglenchus) parvus* Siddiqi, 1963 is here rejected and replaced by *Tylenchus (Ottolenchus) equisetus* Hussain & Khan, 1967, an available name.

Paraphelenchus micoletzkyi Ali, Farooqui & Suryawanshi, 1970, a primary homonym of *P. micoletzkyi* Steiner, 1941 (now in *Metaphelenchus*), is here rejected and replaced by *Paraphelenchus alii* nomen novum.

Hemicyclophora tessellata Boonduang & Ratanaprapa, 1974 is a junior primary homonym of *H. tessellata* Sauer, 1958. The form described by Boonduang and Ratanaprapa (1974) as a new species belongs in fact to the species *Caloosia paradoxa* (Boonduang, *in litt.*). *H. tessellata* Boonduang & Ratanaprapa, 1974 is here rejected and replaced by *Caloosia paradoxa* (Luc, 1958) Brzeski, 1974, an available name (Art. 60).

Pratylenchus capitatus Das & Sultana, 1979, a junior primary homonym of *P. capitatus* Ivanova, 1968, is here rejected and replaced by *Pratylenchus dasi* nomen novum.

Art. 59, a states that a junior primary homonym must be permanently rejected. *Tylenchus cobbi* was proposed by de Man, 1906 to replace *T. gracilis* Cobb, 1888, junior homonym of *T. gracilis* de Man, 1880. The species of de Man (1880) was later transferred to *Tylenchorhynchus* by Micoletzky (1925). It is now in *Hirschmanniella* after the action of Luc and Goodey (1964). The species of Cobb (1888) was transferred to *Aphelenchus* by Cobb (1891), even before de Man rejected its original name. Probably because of these transfers Steiner (1932) and Goodey (1960) used the rejected name *gracilis* for the species described by Cobb instead of the replacement name *cobbi*. This is not justified. The taxon originally described by Cobb must be named *Aphelenchus cobbi* (de Man, 1906) Steiner, 1932.

Goodey (1932) transferred *Tylenchus dubius* Bütschli, 1873 and *Aphelenchus dubius* Steiner, 1914 to *Anguillulina*. He proposed *Anguillulina macrura* replacement name for *A. dubius* Steiner. *A. dubia* (Bütschli) and *A. macrura* (Goodey) were later both transferred to *Tylenchorhynchus*. In 1970, Siddiqi transferred *T. macrura* (Goodey) to *Merlinius*, while *T. dubius* (Bütschli) remained in *Tylenchorhynchus*. Siddiqi revalidated the name *dubius* in *Merlinius dubius* (Steiner) Siddiqi. Because the secondary homonym *A. dubius* Steiner was rejected before 1961 it cannot be restored. Therefore, *M. dubius*

(Steiner) Siddiqi is again rejected and replaced by *Merlinius macrura* (Goodey) Siddiqi.

Tarjan (1973) regarded the population studied by Goodey (1932) when he proposed the nomen novum *Anguillulina macrura* to be different from the species originally described by Steiner as *Aphelenchus dubius*. Tarjan considered *Aphelenchus dubius* Steiner a *species inquirenda* and treated Goodey's population as a valid, distinct species which he named *Merlinius macrura* (Goodey) Siddiqi.

This is unacceptable because the name *macrura* was clearly attached by Goodey (1932) to the species described by Steiner. Tarjan (1973) considers that Steiner's species cannot be identified at generic level. It should be listed as *Anguillulina macrura* Goodey *species incertae sedis*. The population described by Goodey (1932) under this name and discussed by Dr. Tarjan (1973) is here renamed *Merlinius caroli* nomen novum (from Charlie Tarjan).

Basiria elegans Patil & Khan, 1983 is a junior secondary homonym of *B. elegans* (Khan & Khan 1975) Bajaj & Bhatti, 1979 (syn. : *Basiroides elegans* Khan & Khan 1975). It is here renamed *Basiria patili* nomen novum.

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REFERENCES*

- ABDEL-RAHMAN, F. H. (1981). *Taxonomy, morphology and biology of two new species of nematodes parasitic on sedge, Scirpus robustus Pursh. Ph. D. Thesis, Univ. Calif., Davis, 89 pp.*
- ADILOVA, N. B. (1973). Fauna nematod Kukuruzi i prikor-nevoi pochvy, ee dinamika b usloviyakh Tashkentskoi oblasti. In : [The question of phytonematodes in Uzbekistan]. Tashkent, Izdatelistvo "PAN" Vol. 3 : 15-68.
- ARIAS, M. & JIMÉNEZ-MILLAN, F. (1968). *Chitinotylenchoides mediterraneensis* n. gen. n. sp. (Abstr.). VIII Symp. Europ. Soc. Nematol., Antibes, September 8-14, 1965 : 34.
- ARIAS, M. & JIMÉNEZ-MILLAN, F. (1973). *Tylopharynx foetidus* (Bütschli, 1874) Sachs, 1950 en el levante Español. Cuad. Cienc. Biol., 2 : 53-55.

* Articles included in the literature list in Tarjan and Hopper (1974) are not referenced here.

- BAJAJ, H. K. & BHATTI, D. S. (1979). Two new species of *Basiria* Siddiqi, 1959 (Tylenchida) from Haryana, India. *Indian J. Nematol.*, 8 : (1978) 95-101.
- BOONDUANG, A. & RATANAPRAPA, D. (1974). Identification of plant parasitic nematodes of Thailand. Systematic study of Criconeematidae in Thailand with description of three new species. *Pl. Protect. Serv. tech. Bull., Dept. Agric., Bangkok, Thailand*, No. 22, 16 p.
- BRAVO-LIMA, M. (1965). *Studies on species of the genus Xiphinema and other nematodes*. PhD Thesis, Fac. Sci. Univ. London, Rothamsted, 165 p.
- CID DEL PRADO-VERA, I. (1976). *Estudio taxonomico de algunas especies de la familia Criconeematidae (Taylor 1936) Thorne, 1949, presentes en cultivos de importancia agricola de Mexico*. Thesis. Esc. Nac. Agric., Coleg. Postgrad., Chapingo, Mexico, 98 p.
- CID DEL PRADO-VERA, I. (1978). Three new species of *Macroposthonia* (Nematoda : Criconeematidae) from Mexico. *Nematologica*, 24 : 29-36.
- DAS, V. M. & SULTANA, S. (1979). Five new species of the genus *Pratylenchus* from vegetable crops of Hyderabad, (Andhra Pradesh). *Indian J. Nematol.*, 9 : 5-14.
- DE CONINCK, L. A. P. (1945). Sur la variabilité de *Criconeema cobbi* (Micoletzky 1925) et la systématique du genre *Criconeema* Hofmäner & Menzel, 1914 (Criconeematinae, Nematoda), avec des données nouvelles sur quelques espèces du genre. *Bull. Musée r. Hist. Nat. Belg.*, 21 : 1-31.
- DE GRISSE, A. & LOOF, P. A. A. (1965). Revision of the genus *Criconemoides* (Nematoda). *Meded. LandbHoogesch. OpzoekStns Gent*, 30 : 577-603.
- EROSHENKO, A. S. (1984). [New species of ectoparasitic nematodes from the rhizosphere of conifers in the Primorsk territory]. *Parazitologiya*, 18 : 75-77.
- EROSHENKO, A.S. (1967). [The nematode fauna of oats in the Primorsk territory] *Mater. nauch. Konf. vses. Obshch. Gel'mint. Year 1966*, Part 5 : 159-160.
- FILIPPEV, I. N. (1934). [*Harmful and useful nematodes in rural economy*] Moscow, Leningrad, 440 p.
- GOLDEN, A.M. (1971). Classification of the genera and higher categories of the order Tylenchida (Nematoda). In : Zuckerman, B. M., Mai, W. F. & Rohde, R. A. (Eds.), *Plant parasitic nematodes. Volume 1. Morphology, anatomy, taxonomy, and ecology*. New York, Academic Press : 191-232.
- GOODEY, J.B. (1960). The classification of the Aphelenchoidea Fuchs, 1937. *Nematologica*, 5 : 111-126.
- GOODEY, T. (1932). The genus *Anguillulina* Gerv. & V. Ben., 1859, vel *Tylenchus* Bastian, 1865. *J. Helminth.*, 10 : 75-180.
- GOODEY, T. (1963). *Soil and freshwater nematodes*. 2nd Ed., rev. J. B. Goodey. Methuen, London, 544 p.
- GUBINA, V. G. (1973). [*Scutellonema picea* n. sp. (Nematoda : Hoplolaimidae) and a new variety of *Paratylenchus nanus* Cobb, 1923 (Nematoda : Tylenchidae) from roots and rhizosphere of conifer seedlings]. *Trudy gel'mint. Lab.*, 23 : 52-55.
- HOPPER, B. E. & TARJAN, A. C. (1977). *Supplement for the year 1972 to Nomenclatorial Compilation of Plant and Soil Nematodes*. Agric. Canada Res. Branch (Ed.) : 17 p.
- HOPPER, B. E. & TARJAN, A. C. (1978). *Supplement for the year 1973 to Nomenclatorial Compilation of Plant and Soil Nematodes*. Agric. Canada Res. Branch (Ed.) : 21 p.
- HUETTEL, R. N. (1982). Genetic basis for the identification and separation of the two Florida races of *Radopholus similis*. Ph. D. diss. univ. Florida, 117 pp.
- HUETTEL, R. N., DICKSON, D. W. & KAPLAN, D. T. (1984). *Radopholus citrophilus* sp. n. (Nematoda), a sibling species of *Radopholus similis*. *Proc. helminth. Soc. Wash.*, 51 : 32-35.
- KAPOOR, M. (1982). *Taxonomic studies on nematodes of some medicinal and aromatic plants of North India*. Thesis, Panjab Univ., Chandigarh, India, 418 p.
- KAZACHENKO, I. P. (1975). [New nematode species of the family Tylenchidae from the litter of coniferous forests] *Trudy Biol.-Pochven. Inst.*, 26 : 178-186.
- KHAN, E. & NANJAPPA, C. K. (1972). *Pseudhalenchus acutus*, sp. nov., and *Tylenchorhynchus aerolatus*, sp. nov. (Nematoda : Tylenchida) from India. *Bull. Entomol.*, 12 (1971) : 55-58.
- LOOF, P. A. A. (1964). Free-living and plant-parasitic nematodes from Venezuela. *Nematologica*, 10 : 201-300.
- LUC, M. & RASKI, D. J. (1981). Status of genera *Macroposthonia*, *Criconemoides*, *Criconebella* and *Xenocriconebella* (Criconeematidae : Nematoda). *Revue Nématol.*, 4 : 3-21.
- PATIL, K. J. & KHAN, E. (1983). Taxonomic studies on nematodes of Vidarbha region of Maharashtra, Indian. VII.. Four new species of Tylenchid nematodes. *Indian J. Nematol.*, 12(1982) : 330-338.
- PERRY, V. G. (1959). Anatomy, taxonomy, and control of certain spiral nematodes attacking blue grass in Wisconsin. *Diss. Abstr.*, 19 : 1509.
- RAY, S. & DAS, S. N. (1978). *Hemicaloosia americana* n. gen., n. sp. (Nematoda : Hemicyclophoridae) from Orissa, India. *O.U.A.T. J. Res.*, 8 : 131-138.
- RODRIGUEZ-MONTESSORO, R. (1977). Contributions to the taxonomy of Trichodoridae (Thorne 1935) Clark, 1961 (Nematoda : Diphtherophorina). *Diss. Abstr., internat.*, 37B : 5902.
- RODRIGUEZ-MONTESSORO; R. & BELL, A. H. (1978). Three new species of Trichodoridae (Nematoda : Diphtherophorina) with observations on the vulva in *Paratrichodorus*. *J. Nematol.*, 10 : 132-141.
- RODRIGUEZ-MONTESSORO, R., SHER, S. A. & SIDDIQI, M. R. (1978). Systematics of the monodelphic species of Trichodoridae (Nematoda : Diphtherophorina) with descriptions of a new genus and four new species. *J. Nematol.*, 10 : 141-152.
- SHER, S. A. (1948). *Revision of the genus Pratylenchus (Nematoda : Tylenchidae)*. PhD Thesis, Univ. Calif., Riverside, 64 p.
- SIDDIQI, M. R. (1970). On the plant-parasitic nematode genera *Merlinius* gen. n. and *Tylenchorhynchus* Cobb and the classification of the families Dolichodoridae and Belonolaimidae n. rank. *Proc. helminth. Soc. Wash.*, 37 : 68-77.

- SIDDIQUI, A. U. & KHAN, E. (1983). Taxonomic studies on Tylenchidae (Nematoda) on India. II. Descriptions of two new sp. of *Cosaglenchus* gen. n. along with proposition of a new sub-family Aglenchinae. *Indian J. Nematol.*, 12 (1982) : 303-311.
- SOLTWEDEL, F. W. O. (1889). *Verslag van de Directeur. Vijfde Jversl, Proefstation voor Midden Java over 1888-1889.*
- STEINER, G. (1932). Annotations on the nomenclature of some plant parasitic nematodes. *J. Wash. Acad. Sci.*, 22 : 517-518.
- SULTAN, M. S. & JAIRAJPURI, M. S. (1979). A new species of the genus *Scutellonema* Andrassy, 1958 (Nematoda : Hoplolaimidae) from Manipur, India. *Curr. Sci.*, 48 : 277-278.
- TARJAN, A. C. (1973). A synopsis of the genera and species in the Tylenchorhynchinae (Tylenchoidea, Nematoda). *Proc. helminth. Soc. Wash.*, 40 : 123-144.
- TARJAN, A. C. & HOPPER, B. E. (1974). *Nomenclatorial compilation of plant and soil nematodes.* Society of Nematologists, 419 p.
- TAYLOR, A. L. (1936). The genera and species of the Cricone-matinae, a sub-family of the Anguillulinidae (Nematoda). *Trans. Am. microsc. Soc.*, 55 : 391-421.
- VAN DEN BERG, E. & HEYNS, J. (1975). South African Hoplolaiminae. 4. The genus *Helicotylenchus* Steiner, 1945. *Phytophylactica*, 7 : 35-52.
- VAN DEN BERG, E. & HEYNS, J. (1977). Descriptions of new and little known Criconematidae from South Africa (Nematoda). *Phytophylactica*, 9 : 95-101.
- WHITLOCK, L. S. (1957). Notes on *Radopholus oryzae* (Nematoda, Phasmidia) with a key to the genus and description of a new species, *R. paludosus*. M. S. Thesis, Louisiana St. Univ., 74 p.
- WOUTS, W. H. (1970). *A revision (to genus level) of the sub-family Heteroderinae (Nematoda : Tylenchida) with a description of two new genera.* PhD Thesis, Univ. Calif., Riverside, 72 p.

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