



A check list of the helminths of guineafowls (Numididae) and a host list of these parasites

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ABSTRACT

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Published and personal records have been compiled into a reference list of the helminth parasites of guineafowls. Where data on other avian hosts was available these have been included for completeness' sake and to give an indication of host range. The parasite list for the Helmeted guineafowls, *Numida meleagris*, includes five species of acanthocephalans, all belonging to a single genus, three trematodes belonging to three different genera, 34 cestodes representing 15 genera, and 35 nematodes belonging to 17 genera. The list for the Crested guineafowls, *Guttera edouardi*, contains a single acanthocephalan together with 10 cestode species belonging to seven genera, and three nematode species belonging to three different genera. Records for two cestode species from genera and two nematode species belonging to a single genus have been found for the guineafowl genus *Acryllium*. Of the 70 helminths listed for *N. meleagris*, 29 have been recorded from domestic chickens.

Keywords: Acanthocephalans, cestodes, check list, guineafowls, host list, nematodes, trematodes

INTRODUCTION

Guineafowls (Numididae) originated on the African continent, and with the exception of an isolated population of Helmeted guineafowls in north-west Morocco, their natural distribution is restricted to sub-Saharan Africa (Del Hoyo, Elliott & Sargatal 1994). In the wake of commercial game bird farming, but also as ornamental birds in aviculture, they have been introduced to many other parts of the world, such as France, Hungary, Italy, Greece, the United Kingdom, the USA, Australia and different regions of the former USSR (Haziev & Khan 1991). According to Belshaw (1985) guineafowls were imported

into the southern Mediterranean region several millennia before turkeys and hundreds of years before junglefowls from which today's domestic chickens were derived. Currently four genera of guineafowls are recognized, namely *Acryllium* Gray, 1840, *Agelastes* Bonaparte, 1850, *Guttera* Wagler, 1832 and *Numida* Linnaeus, 1766 (Del Hoyo *et al.* 1994).

Many publications on the helminth fauna of guineafowls originate from northern and western Africa, where, second only to the introduced and native domestic fowls, they are farm-reared as a source of protein. The economic importance of guineafowls and domestic fowls within the poultry industry, as well as the fact that domestic fowls are kept by many private households to augment their income, necessitated a better understanding of factors, such as gastro-intestinal parasites, influencing the success-

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ful rearing of these birds. Consequently studies have been conducted to assess the extent to which guineafowls and domestic fowls can serve as alternative hosts for their respective helminths and possibly be adversely affected by them (Hodasi 1969, 1976; Fabiyi 1972; Fatunmbi & Olufemi 1982; Vercruyssen, Harris, Bray, Nagalo, Pangui & Gibson 1985).

In southern Africa Ortlepp (1937, 1938a, b, 1963), Saayman (1966), Crowe (1977) and Verster & Ptasinska-Kloryga (1987) have published on the helminth fauna of guineafowls. No data on the helminths infecting species of the guineafowl genus *Agelastes* could be found, and we are of the opinion that the comparatively short parasite lists for the genera *Acryllium* and *Guttera* reflect a lack of data rather than an absence of parasites.

The check list herein is intended as a quick reference aid and is split into two sections. The first section contains the parasites listed under their scientific names and authorities. Synonyms are provided either as generic synonyms in the case where whole genera have been synonymized or specific synonyms. The second section lists the hosts and their synonyms alphabetically, together with their respective parasites, also in alphabetical order.

The synonymy of the acanthocephalan genus *Mediorhynchus* Van Cleave 1916 is as given by Van Cleave (1947) and Schmidt & Kuntz (1977) and specific synonymy is according to Yamaguti (1963). For an in-depth review of the involved history of this genus's nomenclature the reader is referred to Van Cleave (1947).

The taxonomy of digenean trematodes follows Yamaguti (1958), but since the application of molecular techniques to this group has recently led to many changes, the reader is encouraged to consult the latest literature.

The classification of cestodes is based on the works of Khalil, Jones & Bray (1994). Information on generic synonyms and type species follows Khalil *et al.* (1994), while that on other species as well as the hosts and geographic distribution has mainly been derived from Yamaguti (1959), Schmidt (1986) and additional published records.

As regards nematode taxonomy, the authors have followed the CIH Keys to the nematode parasites of vertebrates (Anderson, Chabaud & Willmott, 1974–1983) and, where differences have occurred, have accepted the validity of genera and species as listed by Gibson (2005). With regard to generic synonyms, only synonyms listed in the CIH keys and by Gibson

(2005) have been included in the check list. Specific synonyms, Type species and other species, as well as much of the data on hosts and geographic distribution are according to Yamaguti (1961) and Gibson (2005). Host and geographic data have been supplemented by including additional literature references.

The families and subfamilies of cestodes and nematodes are listed according to the system of Khalil *et al.* (1994) and the CIH Keys, respectively, but genera within these families are presented in alphabetical order. Synonyms have been arranged chronologically. The hosts and geographic localities per author are listed alphabetically. If several authors made reference to the same host, the authors are listed in chronological order.

The nomenclature and taxonomy of the avian hosts mainly follows Peterson (1999) and has been supplemented by Lepage (2007). Avian orders and families, as well as the nomenclature of southern African hosts follow Hockey, Dean & Ryan (2005).

In order to avoid excessive duplication, Helmeted guineafowls are listed below as *N. meleagris* only without regards to the subspecies. A total of nine subspecies of *N. meleagris* are currently recognized (Del Hoyo *et al.* 1994, Peterson 1999). These are: *N. m. coronatus* Gurney, 1868, *N. m. galeatus* Pallas, 1767, *N. m. marungensis* Schalow, 1884, *N. m. meleagris* (Linnaeus, 1758), *N. m. mitratus* Pallas, 1767, *N. m. papillosus* Reichenow, 1894, *N. m. reichenowi* Ogilvie-Grant, 1894, *N. m. sabyi* Hartert, 1919 and *N. m. somaliensis* Neumann, 1899. Del Hoyo *et al.* (1994) give a detailed list of the geographic range of the various subspecies of Helmeted guineafowls.

In the case of the Crested guineafowls, *Guttera edouardi* (Hartlaub, 1867) we follow Hockey *et al.* (2005) and Lepage (2007). Crowe (1978, cited in Hockey *et al.* 2005) had synonymized *G. edouardi* with *Guttera pucherani* (Hartlaub, 1861), but this decision was reversed and *G. edouardi* reinstated (Little & Crowe 2000, cited in Hockey *et al.* 2005). Peterson (1999) still lists *G. edouardi* as a subspecies of *G. pucherani*.

Hosts listed in the literature as *Gallus domesticus* or *Gallus gallus domesticus* are referred to below as domestic chicken. Lepage (2007) lists domestic chicken as unconfirmed subspecies, *G. g. domesticus* (no authority given), of the Red Junglefowl, *Gallus gallus* (Linnaeus, 1758). However, this subspecies is not included in the five subspecies listed by Peterson (1999).

PARASITE/HOST CHECK LIST**PHYLUM ACANTHOCEPHALA****Class Archiacanthocephala****Order Gigantorhynchidea****Family GIGANTORHYNCHIDAE Hamann, 1892****GENUS MEDIORHYNCHUS VAN CLEAVE 1916**

Echinorhynchus Zoega in Müller, 1776, in part; *Gigantorhynchus* Hamann, 1892, in part; *Heteroplus* Kostylev, 1914; *Empodius* Travassos, 1916; *Micracanthorhynchus* Travassos, 1917; *Leiperacanthus* Bhalerao, 1937; *Disteganius* Lehmann, 1953, *nomen nudum*; *Empodisma* Yamaguti, 1963

Type species: *Mediorhynchus papillosus* Van Cleave, 1918

- Mediorhynchus empodius* (Skryabin, 1913) Meyer, 1933
Ardea, *Ardeotis arabs*, *Numida meleagris*
Yamaguti (1963), Belgium, Russia
- Mediorhynchus gallinarum* (Bhalerao, 1937) Van Cleave, 1947
Domestic chicken
Yamaguti (1963), India, Philippines
Talbot (1971), Papua and New Guinea
Gallinaceous birds
Schmidt & Kuntz (1977), (East-) Africa, India, Papua and New Guinea, Philippines
Numida meleagris
Junker & Boomker (2006), South Africa
- Mediorhynchus numidae* (Baer, 1925) Meyer, 1933
Numida meleagris
Meyer (1932), Namibia
Oosthuizen & Markus (1967), South Africa
- Mediorhynchus selengensis* Harris, 1973
Numida meleagris
Vercryusse *et al.* (1985), Burkina Faso
Schmidt & Kuntz (1977) synonymized this species with *M. gallinarum*.
- Mediorhynchus taeniatus* (Von Linstow, 1901) Dollfus, 1936
Empodius segmentatus De Marval, 1902
Ardeotis arabs
Dollfus (1951) in Yamaguti (1963), Mauritania
Chlamydotis undulata
Dollfus (1951) in Yamaguti (1963), Morocco
Guttera edouardi
Southwell & Lake (1939), Democratic Republic of the Congo
Numida meleagris
Von Linstow (1901), Kenya
Meyer (1932), Africa, Malawi
Southwell & Lake (1939), Democratic Republic of the Congo
Graber (1959), Chad

Fabiyi (1972), Nigeria
Hodasi (1976), Ghana
Crowe (1977), South Africa

Burhinus oedicnemus, *Chlamydotis macqueniei*, *Otis tarda*

Meyer (1932), Africa, Malawi

PHYLUM PLATHYHELMINTHES**Class Trematoda****Order Digenea****Family BRACHYLAEMIDAE Joyeaux & Foley, 1930****GENUS POSTHARMOSTOMUM WITENBERG, 1923**

Type species: *Postharmostomum gallinum* (Witenberg, 1923)

- Postharmostomum gallinum* (Witenberg, 1923)
Crested guineafowl
Khan, Khan & Rayaz (1984), Pakistan
Domestic chicken
Yamaguti (1958), Hawaii, Japan, Russian Turkestan
Numida meleagris
Yamaguti (1958), North Africa

Family DICROCOELIIDAE Odhner, 1911**GENUS DICROCOELIUM DUJARDIN, 1845**

Type species: *Dicrocoelium lanceatum* Stiles & Hassal, 1898

- Dicrocoelium macrostomum* Odhner, 1911
Coturnix coturnix
Yamaguti (1958), Russia
Numida meleagris
Lesbouyries (1941), Egypt
Junker & Boomker (2007b), South Africa

GENUS LUTZTREMA TRAVASSOS, 1941

Type species: *Lutztrema olliquum* (Travassos, 1917)

Numida meleagris
Hodasi (1976), Ghana

Class Cestoda**Subclass Eucestoda****Order Cyclophyllidea****Family DAVAINIIDAE Braun, 1900****Subfamily Davaineinae Braun, 1900****GENUS ABULADZUGNIA SPASSKII, 1973**

Type species: *Abuladzugnia gutterae* (Ortlepp, 1963)

- Abuladzugnia gutterae* (Ortlepp, 1963)
Cotugnia gutterae Ortlepp, 1963
Guttera edouardi
Ortlepp (1963), Mozambique
Numida meleagris
Junker & Boomker (2007b), South Africa

2. *Abuladzugnia transvaalensis* (Ortlepp, 1963)
Cotugnia transvaalensis Ortlepp, 1963
Numida meleagris
 Ortlepp (1963), South Africa

GENUS COTUGNIA DIAMARE, 1893

Ershovitugnia, Spasskii, 1973; *Pavugnia* Spasskii, 1984; *Rostelugnia* Spasskii, 1984

Type species: *Cotugnia digonopora* (Pasquale, 1890) Diamare, 1893

1. *Cotugnia crassa* Fuhrmann, 1909
 Guineafowl
 Hudson (1934), East Africa
 Bwangamoi (1968), Uganda
Numida meleagris
 Fuhrmann (1909) in Ortlepp (1963), the White Nile
 Baer (1925), Namibia
 Baer (1926), East Africa, West Africa
 Ortlepp (1963), Tanzania
 The White Nile rises from Lake Victoria in Uganda and enters the Sudan where it joins the Blue Nile in Karthoum to form the Nile. White Nile is one of the states of Sudan.
2. *Cotugnia digonopora* (Pasquale, 1890) Diamare, 1893
Taenia digonopora Pasquale, 1890
Anser, *Columba livia*, *Gallus gallus*, *Numida meleagris*
 Schmidt (1986), Africa, Burma, India, Indonesia, Philippines
 Guineafowl
 Baylis (1934), Uganda
3. *Cotugnia meleagridis* Joyeux, Baer & Martin, 1936
Numida meleagris
 Joyeux, Baer & Martin (1936), Northern Somaliland
 Graber (1959), Chad
 Fabiyi (1972), Nigeria
 Hodasi (1976), Ghana
4. *Cotugnia shohoi* Sawada, 1971
Acryllium vulturinum
 Schmidt (1986), Somalia
5. *Cotugnia tuliensis* Mettrick, 1963
Numida meleagris
 Schmidt (1986), Zimbabwe

GENUS DAVAINEA BLANCHARD, 1891

Type species: *Davainea proglottina* (Davaine, 1860) Blanchard, 1891

1. *Davainea nana* Fuhrmann, 1912
Guttera edouardi
 Ortlepp (1963), Zambia
Numida meleagris
 Fuhrmann (1912), Northern Africa
 Junker & Boomker (2007b), South Africa
Vanellus cinereus
 Schmidt (1986), Africa, Japan

2. *Davainea paucisegmentata* Fuhrmann, 1909
Numida meleagris
 Baer (1926), Sudan, West Africa
 Schmidt (1986), Africa, Europe
3. *Davainea paucisegmentata* var. *dahomeensis* Joyeux & Baer, 1928
Numida meleagris
 Schmidt (1986), France
4. *Davainea proglottina* (Davaine, 1860) Blanchard, 1891
Taenia proglottina Davaine, 1860; *Davainea varians* Sweet, 1910; *Davainea dubius* Meggitt, 1916
Alectoris graeca, *Bonasa umbellus*, *Gallus gallus*, *Perdix perdix*
 Schmidt (1986), Cosmopolitan
 Domestic chicken
 Baer (1926), South Africa
 Magwisha, Kassuku, Kyvsgaard & Permin (2002), Tanzania
Numida meleagris
 Nfor, Ajanusi, Agbede & Esievo (1999), Nigeria

GENUS NUMIDELLA SPASSKAYA & SPASSKII, 1971

Type species: *Numidella numida* (Fuhrmann, 1912) Spasskaya & Spasskii, 1971

1. *Numidella numida* (Fuhrmann, 1912) Spasskaya & Spasskii, 1971
Davainea numida Fuhrmann, 1912; *Raillietina (Paroniella) numida* (Fuhrmann, 1912) Fuhrmann, 1920; *Raillietina (Paroniella) magninumida* Jones, 1930
 Guineafowl
 Baylis (1934), Uganda
Guttera, *Numida meleagris*
 Schmidt (1986), Africa, Cuba, North America
Guttera
 Baer (1933), Zimbabwe
 Baer (1933) lists '*Guttera eduardi* Elliot' as host. None of the subspecies of *Guttera eduardi* listed in Lepage (2007) has been described by Elliot, but Lepage (2007) lists *Guttera pucherani verreauxi* (Elliot, 1870).
Meleagris gallopavo, *Numida meleagris*
 Jones (1930), North America
Numida meleagris
 Baer (1925), Namibia
 Ortlepp (1963), South Africa
 Fabiyi (1972), Nigeria

GENUS POROGYNIA RAILLIET & HENRY, 1909

Polycoelia Fuhrmann, 1907, preoccupied

Type species: *Porogynia paronai* (Moniez, 1892) Railliet & Henry, 1909

1. *Porogynia paronai* (Moniez, 1892) Railliet & Henry, 1909
Taenia paronai Moniez, 1892; *Linstowia lata* Fuhrmann, 1901; *Polycoelia lata* (Fuhrmann, 1901) Fuhrmann, 1907; *Malika numida* Woodland, 1929; *Raillietina (Paroniella) woodlandi* Baylis, 1934

- Guttera edouardi*, *Numida meleagris*, *Pternistis natalensis*
Schmidt (1986), Africa, Europe
Guineafowl
Woodland (1928), Sudan
Baylis (1934), Uganda
- Guttera edouardi*
Ortlepp (1963), Zambia
- Numida meleagris*
Baer (1925), Namibia
Baer (1926), East Africa, West Africa
Woodland (1928), Sudan
Ortlepp (1963), South Africa, Swaziland
Cruz e Silva (1971), Mozambique
Fabiyyi (1972), Nigeria
- GENUS RAILLIETINA FUHRMANN, 1920**
- Kotlania* López-Neyra, 1929; *Nonarmiella* Movsesyan, 1966; *Nonarmina* Movsesyan, 1966; *Kotlanotaurus* Spasskii, 1973; *Roytmania* Spasskii, 1973; *Skrjabinotaurus* Spasskii & Yurpalova, 1973; *Oschmarinetta* Spasskii, 1984
- Type species: *Raillietina tetragona* (Molin, 1858)
- Raillietina angusta* Ortlepp, 1963
Raillietina (*Raillietina*) *angusta* Ortlepp, 1963
Numida meleagris
Ortlepp (1963), South Africa
 - Raillietina cohni* (Baczynska, 1914) Fuhrmann, 1924
Davainea cohni Baczynska, 1914; *Raillietina* (*Ransomia*) *cohni* (Baczynska, 1914) Fuhrmann, 1920; *Raillietina* (*Raillietina*) *cohni* (Baczynska, 1914) Fuhrmann, 1924
Gallus gallus, *Numida meleagris*, *Pterocles exustus*, *Pterocles orientalis arenarius*
Schmidt (1986), Africa, Nepal
Domestic chicken
Baer (1926), East Africa
 - Raillietina echinobothrida* (Megnin, 1880) Fuhrmann, 1924
Taenia echinobothrida Megnin, 1880; *Taenia botrioplites* Piana, 1881; *Davainea parechinobothrida* Magalhães, 1898; *Davainea penetrans* Baczynska, 1914; *Raillietina* (*Johnstonia*) *echinobothrida* (Megnin, 1880) Fuhrmann, 1920; *Raillietina* (*Raillietina*) *echinobothrida* (Megnin, 1880) Fuhrmann, 1924; *Raillietina* (*Fuhrmannetta*) *echinobothrida* (Megnin, 1880) Stiles & Orleman, 1926
Columba livia, *Gallus gallus*, *Gallus gallus bankiva*, *Meleagris gallopavo*, *Numida meleagris*, *Perdix perdix*, *Phasianus colchicus*
Schmidt (1986), Cosmopolitan
Domestic chicken
Baer (1926), West Africa
Le Roux (1926), South Africa
Joyeux *et al.* (1936), Northern Somalia
Poulsen, Permin, Hindsbo, Yelifari, Nansen & Bloch (2000), Ghana
Magwisha *et al.* (2002), Tanzania
Permin, Esmann, Hoj, Hove & Mukaratirwa (2002), Zimbabwe
 - Raillietina pintneri* (Klaptocz, 1906) Fuhrmann, 1924
Davainea pintneri Klaptocz, 1906; *Raillietina* (*Ransomia*) *pintneri* (Klaptocz, 1906) Fuhrmann, 1920; *Raillietina* (*Raillietina*) *pintneri* (Klaptocz, 1906) Fuhrmann 1924; *Kotlania pintneri* (Klaptocz, 1906) López-Neyra, 1931
Guttera
Baer (1933), Zimbabwe
Baer (1933) lists '*Guttera edouardi* Elliot' as host. None of the subspecies of *Guttera edouardi* listed in Lepage (2007) have been described by Elliot, but Lepage (2007) lists *Guttera pucherani verreauxi* (Elliot, 1870).
Guttera edouardi, *Numida meleagris*
Schmidt (1986), Africa
Guttera edouardi
Ortlepp (1963), Mozambique, Zambia
Numida meleagris
Baer (1925), Namibia
Baer (1926), Sudan, West Africa
Graber (1959), Chad
Ortlepp (1963) South Africa, Swaziland
Fabiyyi (1972), Nigeria
 - Raillietina somalensis* Sawada, 1971
Raillietina (*Raillietina*) *somalensis* Sawada, 1971
Acryllium vulturinum
Schmidt (1986), Somalia
 - Raillietina steinhardti* Baer, 1925
Raillietina (*Ransomia*) *steinhardti* Baer, 1925
Guttera edouardi
Ortlepp (1963), Mozambique, Zambia
Numida meleagris
Yamaguti (1959), Africa
Verster & Ptasincka-Kloryga (1987), South Africa
 - Raillietina tetragona* (Molin, 1858) Fuhrmann, 1924
Taenia tetragona Molin, 1858; *Taenia longicollis* Molin, 1858; *Davainea tetragona* (Molin, 1858) Blanchard, 1891; *Davainea bothrioplitis* Fillippi, 1892; *Raillietina* (*Ransomia*) *tetragona* (Molin, 1858) Fuhrmann, 1920; *Raillietina* (*Raillietina*) *tetragona* (Molin, 1858) Fuhrmann, 1924; *Kotlania tetragona* (Molin, 1858) López-Neyra, 1931; *Raillietina* (*Raillietina*) *galli* (Yamaguti, 1935) Sawada, 1955
Gallus gallus, *Guttera edouardi*, *Lagopus lagopus*, *Lagopus muta*, *Meleagris gallopavo*, *Numida meleagris*, *Pavo cristatus*, *Pavo muticus*
Schmidt (1986), Cosmopolitan
Domestic chicken
Baer (1926), East Africa, West Africa
Le Roux (1926), South Africa
Poulsen *et al.* (2000), Ghana

Magwisha *et al.* (2002), Tanzania

Permin *et al.* (2002), Zimbabwe

Numida meleagris

Baer (1926), East Africa, West Africa

Ayeni *et al.* (1983), Nigeria

Haziev & Khan (1991), Republic of Bashkortostan

8. *Raillietina tetragonoides* (Baer, 1925) Fuhrmann, 1932

Raillietina (*Ransomia*) *tetragonoides* Baer, 1925; *Raillietina* (*Raillietina*) *tetragonoides* (Baer, 1925) Fuhrmann, 1932; *Raillietina* (*Raillietina*) *tetragona* var. *cohnii* (Baczynska, 1914) López-Neyra, 1944

Numida meleagris

Baer (1925), Namibia

Schmidt (1986), Africa

9. *Raillietina toyohashiensis* Sawada & Chikada, 1972

Numida meleagris

Schmidt (1986), Japan (zoo)

GENUS SKRJABINIA FUHRMANN, 1920

Raillietina (*Skrjabinia*) Fuhrmann, 1920; *Brumptiella* López-Neyra, 1929; *Armacetabulum* Movsesyan, 1966; *Markewitchella* Spasskii & Spasskaya, 1972; *Daovantienia* Spasskii & Spasskaya, 1976

Type species: *Skrjabinia cesticillus* (Molin, 1858) Fuhrmann, 1920

1. *Skrjabinia cesticillus* (Molin, 1858) Fuhrmann, 1920

Taenia cesticillus Molin, 1858; *Davainea cesticillus* Blanchard, 1891; *Raillietina* (*Raillietina*) *mutabilis* Rüther, 1901; *Raillietina* (*Skrjabinia*) *cesticillus* (Molin, 1858) Fuhrmann, 1920

Colinus virginianus, *Coturnix coturnix*, *Gallus gallus*, *Lagopus lagopus*, *Lagopus lagopus scotica*, *Lyrurus tetrrix*, *Meleagris gallopavo*, *Numida meleagris*, *Perdix perdix*, *Phasianus colchicus*, *Tetrao urogallus*, *Tetraestes bonasia*

Schmidt (1986), Cosmopolitan

Domestic chicken

Baer (1926), West Africa

Le Roux (1926), South Africa

Joyeux *et al.* (1936), Northern Somalia

Poulsen *et al.* (2000), Ghana

Magwisha *et al.* (2002), Tanzania

Permin *et al.* (2002), Zimbabwe

Numida meleagris

Nfor *et al.* (1999), Nigeria

2. *Skrjabinia deweti* Ortlepp, 1938

Numida meleagris

Ortlepp (1938a), South Africa

Subfamily Idiogeninae Fuhrmann, 1907

GENUS IDIOGENES KRABBE, 1867

Ersinogenes Spasskaya, 1961; *Paraidiogenes* Movsesyan, 1971

Type species: *Idiogenes otidis* Krabbe, 1867

1. *Idiogenes* sp.

Numida meleagris

Hodasi (1976), Ghana

Family DILEPIDIDAE Railliet & Henry, 1909

GENUS CHOANOTAENIA RAILLIET, 1896

Type species: *Choanotaenia infundibulum* (Bloch, 1779) Railliet, 1896

1. *Choanotaenia infundibulum* (Bloch, 1779) Railliet, 1896

Taenia infundibulum Bloch, 1779

Domestic chicken

Poulsen *et al.* (2000), Ghana

Magwisha *et al.* (2002), Tanzania

Numida meleagris

Haziev & Khan (1991), Republic of Bashkortostan

Nfor *et al.* (1999), Nigeria

Family PARUTERINIDAE Fuhrmann, 1907

GENUS OCTOPETALUM BAYLIS, 1914

Type species: *Octopetalum gutterae* Baylis, 1914

1. *Octopetalum gutterae* Baylis, 1914

Ascometra gutterae (Baylis, 1914) Baer, 1955

Guttera edouardi, *Numida meleagris*

Baer (1926), East Africa

Baer (1955), Democratic Republic of Congo, Malawi, South Africa

Schmidt (1986) Africa, France

2. *Octopetalum numida* (Fuhrmann, 1909) Baylis, 1914

Rhabdometra numida Fuhrmann, 1909; *Octopetalum longicirrosom* Baer, 1925; *Unciunia sudanea* Woodland, 1928; *Ascometra numida* (Fuhrmann, 1909) Baer, 1955

Guineafowl

Baylis (1934), Uganda

Guttera edouardi

Baer (1955), Sub-Saharan Africa

Ortlepp (1963), South Africa, Zambia

Numida meleagris

Baer (1925), Namibia

Baer (1926), Sudan, West Africa

Woodland (1928), Sudan

Baer (1955), Sub-Saharan Africa

Ortlepp (1963), Central Africa, North Africa, South Africa, southern Africa, Swaziland

Fabiyi (1972), Nigeria

Hodasi (1976), Ghana

GENUS METROLIASTHES RANSOM, 1900

Hexaparuterina Palacios & Barroeta, 1967

Type species: *Metroliaesthes lucida* Ransom, 1900

1. *Metroliaesthes lucida* Ransom, 1900

Alectoris graeca, *Alectoris rufa*, *Coturnix coturnix*, *Gallus gallus*, *Gallus gallus bankiva*, *Guttera edouardi*, *Meleagris gallopavo*, *Numida meleagris*, *Perdix perdix* Schmidt (1986), Africa, Australia, Europe, India, North and South America, Russia

Numida meleagris

Southwell & Lake (1939), Democratic Republic of Congo

Family HYMENOLEPIDIDAE Ariola, 1899**Subfamily Hymenolepidinae Perrier, 1897****GENUS ECHINOLEPIS SPASSKII & SPASSKAYA, 1954**

Type species: *Echinolepis carioca* (Maghalães, 1898) Spasskii & Spasskaya, 1954

1. *Echinolepis carioca* (Maghalães, 1898) Spasskii & Spasskaya, 1954

Davainea carioca Maghalães, 1898; *Taenia conardi* Zürn, 1898; *Hymenolepis carioca* (Maghalães, 1898) Ransom, 1902; *Hymenolepis pullae* Choldkovsky, 1913; *Weinlandia rustica* Meggitt, 1926; *Hymenolepis rustica* Fuhrmann, 1932; *Dicranotaenia carioca* (Maghalães, 1898) Skrjabin & Mathevossian, 1945; *Dicranotaenia rustica* (Meggitt, 1926) Skrjabin & Mathevossian, 1945

Alectoris graeca, *Bonasa umbellus*, *Colinus virginianus*, *Coturnix coturnix*, *Gallus gallus*, *Meleagris gallopavo*

Schmidt (1986), Cosmopolitan

Domestic chicken

Le Roux (1926), South Africa

Magwisha *et al.* (2002), Tanzania

Numida meleagris

Baer (1926), West Africa

GENUS HYMENOLEPIS WEINLAND, 1858

Triorchis Clerc, 1903 preoccupied; *Cloacotaenia* Wolffhügel, 1938; *Amphipetrovia* Spasskii & Spasskaya, 1954; *Australiolepis* Spasskii & Spasskaya, 1954; *Orlovilepis* Spasskii & Spasskaya, 1954; *Staphylepis* Spasskii & Oshmarin, 1954; *Arhynchotaenia* Saakova, 1958 *nec* Pagenstecher, 1877; *Schmelzia* Yamaguti, 1959; *Woodlandia* Yamaguti, 1959; *Arhynchotaeniella* Schmidt, 1986; *Cloacotaeniella* Schmidt, Bauerle & Wertheim, 1988; *Amazirolepis* Schmidt & Daily, 1992

Type species: *Hymenolepis diminuta* (Rudolphi, 1819) Weinland, 1858

1. *Hymenolepis cantaniana* (Polonio, 1860) Ransom, 1909

Taenia cantaniana Polonio, 1860; *Davainea oligophora* Maghalães, 1898; *Davainea cantaniana* Railliet & Lucet, 1899; *Hymenolepis inermis* (Yoshida, 1910) Fuhrmann, 1932

Colinus virginianus, *Coturnix coturnix*, *Gallus gallus*, *Meleagris gallopavo*, *Numida meleagris*, *Pavo cristatus*, *Perdix perdix*, *Phasianus colchicus*, *Tetrao parvirostris*, *Tetrastes bonasia*, *Turnix suscitator*

Schmidt (1986), Cosmopolitan

Domestic chicken

Le Roux (1926), South Africa

Magwisha *et al.* (2002), Tanzania

Le Roux (1926) chose to retain the name *H. inermis* for his unarmed specimens and not to accept the synonymy of *H. inermis* and *H. cantaniana* since the latter had been described as having an armed rostellum.

Numida meleagris

Hodasi (1976), Ghana

Junker & Boomker (2007b), South Africa

GENUS HISPANIOLEPIS LÓPEZ-NEYRA, 1942

Satyrolepis Spasskii, 1965

Type species: *Hispaniolepis villosa* (Bloch, 1782) López-Neyra, 1942

1. *Hispaniolepis falsata* (Meggitt, 1927) López-Neyra, 1942

Hymenolepis falsata Meggitt, 1927.

Numida meleagris

Myers, Wolfgang & Kuntz (1960), Sudan

Chlamydotis undulata

Schmidt (1986), Egypt

2. *Hispaniolepis fedtschenkoi* (Solowiow, 1911) López-Neyra, 1942

Hymenolepis fedtschenkoi Solowiow, 1911; *Hymenolepis gwiletica* Dinnik, 1938

Gallus gallus, *Lyrurus tetrrix*, *Numida meleagris*, *Tetraogallus himalayensis*, *Tetraogallus caucasicus*, *Tetrastes bonasia*

Schmidt (1986), Russia, Europe, Asia, Africa

3. *Hispaniolepis hilmyi* (Skrjabin & Mathevossian, 1942) López-Neyra, 1942

Hymenolepis tetracis Hilmy, 1936

Numida meleagris

Schmidt (1986), Liberia

4. *Hispaniolepis villosa* (Bloch, 1782) López-Neyra, 1942

Numida meleagris

Baer (1926), East Africa

GENUS ORTLEPPOLEPIS SPASSKII, 1965

Type species: *Ortleppolepis multiuncinata* (Ortlepp, 1963) Spasskii, 1965

1. *Ortleppolepis multiuncinata* (Ortlepp, 1963) Spasskii, 1965

Hispaniolepis multiuncinata Ortlepp, 1963

Guttera edouardi

Ortlepp (1963), Zambia

Numida meleagris

Junker & Boomker (2007b), South Africa

PHYLUM NEMATHELMINTHES**Class Nematoda****Subclass Adenophorea****Order Enoplida****Superfamily Trichinelloidea Hall, 1916****Family TRICHURIDAE (Ransom, 1911) Railliet, 1915****Subfamily Capillariinae Railliet, 1915****GENUS AONCHOTHECA LÓPEZ-NEYRA, 1947**

Avesaonchotheca auct.; *Baruscapillaria* auct.; *Capillaria* auct.; *Pterothomix* auct.; *Skrjabinocapillaria* Skarbilovich, 1946

1. *Aonchotheca caudinflata* (Molin, 1858)

Calodium caudinflata Molin, 1858; *Capillaria blomei* Travassos, 1915; *Trichosoma longicollis* Rudolphi, 1819

Chrysolophus, *Columba*, *Coturnix*, *Gallus*, *Lagopus*, *Lyrurus*, *Otis*, *Numida meleagris*, *Passer*, *Perdix*, *Phasianus*, *Sturnus*, *Tetrao*, *Turdus*

Yamaguti (1961), Europe, North America

Yamaguti (1961) lists *Aonchotheca caudinflata* from *Otis* without giving the host's species name. It is therefore not clear whether *Otis* refers to the current genus *Otis*, *Ardeotis*, *Neotis* or *Chlamydotis*.

Domestic chicken

Magwisha *et al.* (2002), Tanzania

Numida meleagris

Ayeni *et al.* (1983), Nigeria

GENUS *CAPILLARIA* ZEDER, 1800

Trichosoma Rudolphi, 1819; *Trichosomum* Creplin, 1829; *Thominx* Dujardin, 1845; *Tridentocapillaria* Barus & Sergeeva, 1990; *Aonchotheca* auct.; *Baruscapillaria* auct.; *Ptherominx* auct.; *Trichocephalus* auct.

Type species: *Capillaria anatis* (Schrank, 1790) Travassos, 1915

1. *Capillaria anatis* (Schrank, 1790)

Trichocephalus capillaris Rudolphi, 1809

Anas, *Anser*, *Clangula*, *Lyrurus*, *Melanitta*, *Merganser*, *Perdix*, *Phasianus*

Yamaguti (1961), Europe, Sakhalin, Siberia

Domestic chicken

Magwisha *et al.* (2002), Tanzania

Numida meleagris

Nfor *et al.* (1999), Nigeria

GENUS *EUCOLEUS* DUJARDIN, 1845

Capillaria auct.; *Thominx* auct.; *Trichocephalus* auct.

1. *Eucoleus annulatus* (Molin, 1858)

Trichosoma annulatus Molin, 1858

Bonasa, *Chrysolophus*, *Colinus*, *Gallus*, *Lyrurus*, *Meleagris*, *Numida meleagris*, *Perdix*, *Phasianus*, *Syrmatiscus*, *Tetrao*

Yamaguti (1961), Asia, Europe, North and South America

Domestic chicken

Magwisha *et al.* (2002), Tanzania

Numida meleagris

Fabiya (1972), Nigeria

Hodasi (1976), Ghana

Vercruyssen *et al.* (1985), Burkina Faso

Subclass Secernentea

Order Rhabditida

Superfamily Rhabditoidea

Family STRONGYLOIDIDAE Chitwood & McIntosh, 1934

GENUS *STRONGYLOIDES* GRASSI, 1879

1. *Strongyloides avium* Cram, 1929

Gallus

Yamaguti (1961), North America, Puerto Rico

Numida meleagris

Fabiya (1972), Nigeria

Order Strongylida

Superfamily Strongyloidea

Family SYNGAMIDAE Leiper, 1912

Subfamily Syngaminae Baylis & Daubney, 1926

GENUS *SYNGAMUS* SIEBOLD, 1836

Cyathostoma auct.; *Ornithogamus* Ryjnikov, 1948

Type species: *Syngamus trachea* (Montagu, 1811) Siebold, 1836

1. *Syngamus trachea* (Montagu, 1811) Siebold, 1836

Fasciola trachea Montagu, 1811; *Syngamus trachealis* Siebold, 1836; *Strongylus trachealis* Nathusius, 1937 in Ortlepp (1923); *Strongylus pictus* Creplin, 1849; *Sclerostomum syngamus* Diesing, 1951 in Ortlepp (1923); *Syngamus furcatus* Theob., 1896; *Syngamus primitivus* Molin, 1861; *Syngamus sclerostomum* Molin, 1861

Galliformes, Passeriformes; rarely Anseriformes, "Ardeiformes", "Pelicaniformes", Piciformes, Otidiformes
Yamaguti (1961), Africa, Australia, Europe, India, North and South America

Domestic chicken

Magwisha *et al.* (2002), Tanzania

Numida meleagris

Hodasi (1976), Ghana

Nfor *et al.* (1999), Nigeria

Order Ascaridida

Superfamily Heterakoidea

Family HETERAKIDAE Railliet & Henry, 1912

Subfamily Heterakinae Railliet & Henry, 1912

GENUS *HETERAKIS* DUJARDIN, 1845

Ganguleterakis Lane, 1914; *Raillietakis* Freitas, 1956; *Inglisakis* Freitas, Vicente & Santos, 1969

Type species: *Heterakis vesicularis* (Frölich, 1791)

1. *Heterakis vesicularis* (Frölich, 1791)

Ascaris vesicularis Frölich, 1791; *Ascaris papillosa*, Bloch, 1782, in part

Anas, *Colinus*, *Coturnix*, *Cygnus*, *Gallus*, *Lagopus*, *Meleagris*, *Numida meleagris*, *Oreortyx pictus*, *Otis*, *Pavo*, *Perdix*, *Phasianus colchicus*, *Polyplectron*, *Tetrao*
Yamaguti (1961), Africa, Europe, North America

Lophophorus, *Lophura*

Yamaguti (1961), Nepal

Yamaguti (1961) lists *Heterakis vesicularis* from *Otis* without giving the host's species name. It is therefore not clear whether *Otis* refers to the current genus *Otis*, *Ardeotis*, *Neotis* or *Chlamydotis*.

2. *Heterakis brevispiculum* Gendre, 1911

Domestic chicken, *Numida meleagris*, *Pternistis bicaratus*

- Yamaguti (1961), Africa, Puerto Rico, South America
- Numida meleagris*
Fabiya (1972), Nigeria
Hodasi (1976), Ghana
3. *Heterakis dispar* (Schrank, 1790)
Ascaris dispar Schrank, 1790
Alectoris, Anas, Anser, Anser cygnoides, Branta, Bernicla, Cairina, Chloephaga, Glaucidium, Numida meleagris, Strix, Surnia, Tadorna
Yamaguti (1961), Cosmopolitan
Domestic chicken
Permin, Magwisha, Kassuku, Nansen, Bisgaard, Frandsen & Gibbons (1997), Tanzania
 4. *Heterakis gallinarum* (Schrank, 1788)
Ascaris gallinarum Schrank, 1788; *Heterakis gallinae* Gmelin, 1790; *Heterakis longicaudata* Von Linstow, 1879
Acryllium, Alectoris, Anas, Anser, Bonasa, Cairina, Chrysolophus, Colinus, Corvus, Coturnix, Cupidonia, domestic chicken, *Francolinus*, Houbara, *Lagopus, Lophophorus, Lophura, Lyrurus, Meleagris, Otis, Pavo, Pedioecetes, Perdix, Phasianus, Pterocles, Strix, Syrmaticus, Tetrao, Tragopan, Tympanuchus*
Yamaguti (1961), Cosmopolitan
Yamaguti (1961) lists *Heterakis gallinarum* from *Otis* without giving the host's species name. It is therefore not clear whether *Otis* refers to the current genus *Otis*, *Ardeotis*, *Neotis* or *Chlamydotis*.
Domestic chicken
Poulsen *et al.* (2000), Ghana
Magwisha *et al.* (2002), Tanzania
Permin *et al.* (2002), Zimbabwe
Numida meleagris
Ayeni *et al.* (1983), Nigeria
Verster & Ptasinska-Kloryga (1987), South Africa
Haziev & Khan (1991), Republic of Bashkortostan
Santa Cruz, Ortis de Rott & Resoagli (1998), Argentina
 5. *Heterakis tenuicauda* Von Linstow, 1883
Alectoris graeca, Alectoris graeca saxatilis
Yamaguti (1961), Turkestan
Acryllium vulturinum
Canavan (1929) in Yamaguti (1961), East Africa
- Family ASCARIDIIDAE Travassos, 1919**
- GENUS ASCARIDIA DUJARDIN, 1845**
- Cotylascaris* Sprent, 1971
- Type species: *Ascaridia hermaphrodita* (Frölich, 1789) Railliet & Henry, 1914
1. *Ascaridia calcarata* (Gendre, 1909)
Numida meleagris
Yamaguti (1961), Africa
Junior synonym of *Ascaridia numidae* (Leiper, 1908) according to Sprehn (1932) in Yamaguti (1961).
 2. *Ascaridia compar* (Schrank, 1790) Travassos, 1913
Ascaris compar Schrank, 1790
Alectoris, Coturnix, Gallus, Lyrurus, Numida meleagris, Oreortyx pictus, Perdix, Tetrao, Tetrastes
Yamaguti (1961), America, Europe, India, Philippines
 3. *Ascaridia galli* (Schrank, 1788) Freeborn, 1932
Ascaris galli Schrank, 1788; *Fusaria inflexa* Zeder, 1800 (Baylis 1932, cited in Yamaguti 1961); *Fusaria reflexa* Zeder, 1800, in part; *Fusaria strumosa* Zeder, 1800, in part (López-Neyra 1946, cited in Yamaguti 1961); *Heterakis brasiliensis* Magalhães, 1892 (Pinto & Lins de Almeida 1935, cited in Yamaguti 1961); *Heterakis granulosa* Von Linstow, 1906 (Baylis 1932, cited in Yamaguti 1961); *Ascaridia hamia* Lane, 1914
Domestic chicken, guineafowl
Yamaguti (1961), Europe, Japan
Alectoris, Bonasa, Cairina, Colinus, duck, *Ithaginis, Lyrurus, Meleagris, Numida meleagris, Perdix, Phasianus, Streptopelia, Tetrao, Tympanuchus*
Yamaguti (1961), Cosmopolitan
Domestic chicken
Poulsen *et al.* (2000), Ghana
Magwisha *et al.* (2002), Tanzania
Permin *et al.* (2002), Zimbabwe
Numida meleagris
Ayeni *et al.* (1983), Nigeria
Verster & Ptasinska-Kloryga (1987), South Africa
Haziev & Khan (1991), Republic of Bashkortostan
 4. *Ascaridia lineata* (Schrank, 1866)
Ascaris lineata Schrank, 1866
Alectoris, Anas, Anser, Bonasa, duck, *Francolinus, Gallus*, goose, *Meleagris, Meleagris ocellata, Numida*, partridge, *Phasianus*, pigeon, *Tympanuchus*
Yamaguti (1961), Africa, Brazil, China, Cuba, Europe, Formosa, India, Malaya, North America, Philippines, Puerto Rico, Turkestan
Domestic chicken
Le Roux (1926), South Africa
 5. *Ascaridia numidae* (Leiper, 1908) Travassos, 1913
Heterakis numidae Leiper, 1908
Alectoris, Guttera
Yamaguti (1961), Africa
Guineafowl
Yamaguti (1961), Puerto Rico
Bwangamoi (1968), Uganda
Numida meleagris
Grabner (1959), Chad
Yamaguti (1961), Africa, the White Nile
Myers *et al.* (1960), Sudan
Fabiya (1972), Nigeria
Hodasi (1976), Ghana
Vercruyssen *et al.* (1985), Burkina Faso
Verster & Ptasinska-Kloryga (1987), South Africa
The White Nile rises from Lake Victoria in Uganda and enters the Sudan where it joins the Blue Nile in Karthoum to form the Nile. White Nile is one of the states of Sudan.

6. *Ascaridia perspicillum* (Rudolphi, 1803)
Ascaris perspicillum Rudolphi, 1803
Anas acuta, domestic chicken, *Meleagris gallopavo*,
Numida meleagris, *Pavo cristatus*, *Tetrao urogallus*,
Tetrastes bonasia rupestris, *Turdus viscivorus*
 Yamaguti (1961), Europe, Hawaii, India, Indonesia,
 Japan, Malaya

Superfamily Subuluroidea

Family SUBULURIDAE (Travassos, 1914) Yorke & Maplestone, 1926

Subfamily Subulurinae Travassos, 1914

GENUS *SUBULURA* MOLIN, 1860

Allodapa auct.

Type species: *Subulura acutissima* Molin, 1860

- Subulura acuticauda* (Von Linstow, 1901) Railliet & Henry, 1914
Oxysoma acuticauda Von Linstow, 1901; *Heterakis acuticauda* (Von Linstow, 1901) Von Linstow, 1909
Numida meleagris
 Von Linstow (1901), Kenya
 Yamaguti (1961), Africa
- Subulura brumpti* (Lopez-Neyra, 1922)
Allodapa brumpti Lopez-Neyra, 1922
Alectoris graeca, *Anas*, *Colinus virginianus texanus*, domestic chicken, *Meleagris gallopavo*, *Numida*, *Perdix perdix*, *Streptopelia orientalis*
 Yamaguti (1961), Europe, Palestine, Cyprus, Cuba, Puerto Rico, Panama, North America, Africa, China
 Domestic chicken
 Hodasi (1969), Ghana
 Mukaratirwa, Hove, Esmann, Hoj, Permin & Nansen (2001), Zimbabwe
Numida meleagris
 Graber (1959), Chad
 Hodasi (1976), Ghana
 Nfor *et al.* (1999), Nigeria
- Subulura dentigera* Ortlepp, 1937
Numida meleagris
 Ortlepp (1937), South Africa
- Subulura differens* (Sonsino, 1890)
Heterakis differens Sonsino, 1890
Alectoris graeca, *Centropus phasianus*, domestic chicken, *Euplectes orix*, *Numida meleagris*, *Perdix perdix canescens*, *Pternistis bicalcaratus*
 Yamaguti (1961), Cosmopolitan
- Subulura suctoria* (Molin, 1860)
Heterakis suctoria Molin, 1860; *Ascaris forcipata* Rudolphi, 1819, in part
Caprimulgus, *Podager*, *Nyctibius*
 Yamaguti (1961), Brazil
Burhinus, *Coturnix*, *Numida*, *Pternistis*
 Yamaguti (1961), South Africa (Transvaal)

Coturnix coturnix, *Lagopus lagopus*, *Phasianus colchicus*, *Phasianus colchicus mongolicus*, *Phasianus colchicus principalis*

Yamaguti (1961), Russia, Turkestan

Domestic chicken

Permin *et al.* (1997), Tanzania

Permin *et al.* (2002), Zimbabwe

Guttera edouardi

Junker & Boomker (2007b), South Africa

Numida meleagris

Ortlepp (1937), South Africa

Fabiyi (1972), Nigeria

Vercruyssen *et al.* (1985), Burkina Faso

- Subulura strongylina* (Rudolphi, 1819)
Ascaris strongylina Rudolphi, 1819; *Strongylus spiculatus* Cobbold, 1861 (Boughton 1939, cited in Yamaguti 1961)
Bonasa, *Bucco*, *Callipepla*, *Caprimulgus*, *Chelidoptera*, *Colinus*, *Cuculus*, *Gallus*, *Malocoptila*, *Monasa*, *Nonnula*, *Numida meleagris*, *Odontophorus*, *Perdix*, *Podager*, *Tetrao*, *Tympanuchus*
 Yamaguti (1961), North America, Puerto Rico
Crypturellus, *Odontophorus capueira*, *Tinamus*
 Yamaguti (1961), Brazil
 Domestic chicken
 Permin *et al.* (1997), Tanzania
 Poulsen *et al.* (2000), Ghana

Order Spirurida Diesing, 1861

Superfamily Thelazioidea

Family THELAZIIDAE Skrjabin, 1915

GENUS *OXYSPIRURA* DRASCHE IN STOSSICH, 1897

Cramispirura Skrjabin, 1931

Type species: *Oxyspirura cephaloptera* (Molin, 1860)

- Oxyspirura mansonii* (Cobbold, 1879)
Filaria mansonii Cobbold, 1879; *Spiroptera emmerezii* Emmeretz & Mégnin, 1901 (Marotel & Carougeau 1902, cited in Yamaguti 1961)
 Domestic chicken, *Gallus gallus*, *Meleagris gallopavo*, *Pavo cristatus*
 Yamaguti (1961), Atlantic and Pacific islands, Australia, Democratic Republic of Congo, Formosa, India, Japan, North America
Numida meleagris
 Hodasi (1976), Ghana

Superfamily Spiruroidea

Family GONGYLONEMATIDAE (Hall, 1916, subfam.) Sobolev, 1949

GENUS *GONGYLONEMA* MOLIN, 1857

Type species: *Gongylonema musculi* (Rudolphi, 1819) Neumann, 1894

- Gongylonema ingluvicola* Ransom, 1904
Gongylonema sumani Bahlerao, 1933 (Baylis 1939, cited in Yamaguti 1961)

- Gallus, Meleagris*, pheasants
Yamaguti (1961), Cosmopolitan
- Domestic chicken
Poulsen *et al.* (2000), Ghana
Magwisha *et al.* (2002), Tanzania
Permin *et al.* (2002), Zimbabwe
- Numida meleagris*
Nfor *et al.* (1999), Nigeria
2. *Gongylonema congolense* Fain, 1955
Cairina moschata
Fain (1955), Democratic Republic of the Congo
- Gallus*
Fain (1955), Burundi, Democratic Republic of the Congo, Rwanda
- Guttera edouardi*
Junker & Boomker (2007b), South Africa
- Numida meleagris*
Fain (1955), Burundi, Democratic Republic of the Congo, Rwanda
Fabiyyi (1972), Nigeria
Graber (1976), Ethiopia
Hodasi (1976), Ghana
Vercruyssen *et al.* (1985), Burkina Faso
Junker & Boomker (2007b), South Africa
- Scleroptila levaillantii*
Fain (1955), Rwanda
3. *Gongylonema sumani* Bhalerao, 1933
Gallus gallus
Bhalerao (1933), India
- Numida meleagris*
Fain & Thienpont (1958), Burundi

Superfamily Habronematoidea

Family HABRONEMATIDAE (Chitwood & Wehr, 1932) Ivaschkin, 1961

Subfamily Habronematinae Chitwood & Wehr, 1932

GENUS CYRNEA SEURAT, 1914

Seurocyrnea Strand, 1929; *Skrjabinochona* Guschanskaja, 1931;
Chenspirura Hsü, 1957 *nec* Kou, 1958

Type species: *Cyrnea eurycerca* Seurat, 1914

- Cyrnea eurycerca* Seurat, 1914
Alectoris, *Coturnix*, *Francolinus*, *Phasianus*, *Merops*
Yamaguti (1961), Africa, Europe
Numida meleagris
Ortlepp (1938a), Southern Africa
Alectoris rufa ("Perdix rouge" in Yamaguti [1961])
Yamaguti (1961), Corsica
- Cyrnea parroti* Seurat, 1917
Cyrnea seurati Lopéz-Neyra, 1918; *Habronema numidae* Ortlepp, 1938; *Cyrnea numidae* (Ortlepp, 1938)
Alectoris barbara
Yamaguti (1961), Algeria
Alectoris rufa

Yamaguti (1961), Spain

Numida meleagris

Ortlepp (1938b), Malawi, South Africa, Swaziland

Fabiyyi (1972), Nigeria

Vercruyssen *et al.* (1985), Burkina Faso

Chabaud (1958) divided the genus *Cyrnea* into the two subgenera *Procyrnea* Chabaud, 1958 and *Cyrnea* Chabaud, 1958, subsequently raising them to genus level (Chabaud, 1975). He also synonymized *Cyrnea* (*Cyrnea*) *numidae* Ortlepp, 1938 and *Cyrnea* (*Cyrnea*) *seuratii* Lopéz-Neyra, 1918 with *Cyrnea* (*Cyrnea*) *parroti* Seurat, 1917. Our specimens of *Cyrnea parroti* collected from *Numida meleagris* in South Africa comply with Ortlepp's (1938b) description of *C. numidae*, but the arrangement of cephalic structures in apical view is that of *C. parroti*. Not having examined Ortlepp's (1938b) specimens we adopt the classification of Chabaud (1958) and list Ortlepp's specimens as *C. parroti*.

GENUS SICARIUS LI, 1934

Type species: *Sicarius dipterum* (Popova, 1927) Li, 1934

- Sicarius caudatus* Quentin & Wertheim, 1975

Numida meleagris

Junker & Boomker (2007b), South Africa

Pycnonotus capensis

Quentin & Wertheim (1975), Israel

Quentin & Wertheim (1975) described *S. caudatus* from *P. capensis* present in the collection of the "Helminthological Laboratory Jerusalem" and list Jerusalem as locality. It should be noted that *P. capensis* is endemic to South Africa (Lepage 2007). We therefore conclude that the authors were either looking at birds kept in captivity in Israel, making it difficult to determine the geographic origin of the parasites or did not have any information on the original locality if the birds had been collected in South Africa.

- Sicarius renatae* Cancrini, Balbo & Iori, 1991

Acryllium vulturinum

Cancrini, Balbo & Iori (1991), Somalia

Subfamily Histioccephalinae Gendre, 1922

GENUS HADJELIA SEURAT, 1916

Gilsonia Geddoelst, 1919; *Stellobronema* Guschanskaja, 1937;
Sobolevicephalus Parukhin, 1964

- Hadjelia truncata* (Creplin, 1825)
Spiroptera truncata Creplin, 1825; *Hadjelia inermis* (Geddoelst, 1919)
Aceros corrugatus
Ortlepp (1964), Malucca Islands, Indonesia
Columba livia
Tadros & Iskander (1975), Egypt
Guttera edouardi, *Numida meleagris*
Junker & Boomker (2007b), South Africa
Tockus erythrorhynchus, *Tockus leucomelas*
Ortlepp (1964), South Africa
Tockus fasciatus semifasciatus
Cram (1927, cited in Ortlepp 1964), Africa

Coracias benghalensis, *Halcyon smyrnensis*, *Upupa epops*

Singh (1949), India

Chabaud & Campana (1950) synonymized *H. inermis* with *H. truncata*. Ortlepp (1964) did not follow this and recorded his specimens as *H. inermis*. Tadros & Iskander (1975) synonymized *H. inermis*, *H. parva* and *H. lhuillieri* with *H. truncata*, designating *H. truncata* as the new type species of the genus.

Family TETRAMERIDAE Travassos, 1914

Subfamily Tetramerinae Railliet, 1915

GENUS TETRAMERES CREPLIN, 1846

Tropisurus Diesing, 1835; *Tropidurus* Wiegmann, 1835, preoccupied; *Gynaecophila* Gubanov, 1950; *Petrowimeres* Tschertkova, 1953; *Microtetrameres* auct.

Type species: *Tetrameres paradoxa* (Diesing, 1835)

1. *Tetrameres fissispina* Diesing, 1861

Acanthophorus horridus Von Linstow, 1876; *Acanthophorus tenuis* Von Linstow, 1876; *Filaria pulicis* Von Linstow, 1894

Alectoris, *Anas acuta*, *Anas clypeata*, *Anas platyrhynchos*, *Anas querquedula*, *Aythya ferina*, *Bucephala clangula*, *Columba livia*, *Cygnus melanocoryphus*, *Fulica atra*, *Gallus*, *Melanitta fusca*, *Meleagris*, *Meleagris gallopavo*, *Mergus merganser*, *Nycticorax nycticorax*, *Perdix*, *Somateria molissima*, *Tachybaptus fluviatilis*
Yamaguti (1961), Africa, Canton, Europe, Formosa, Guam, India, Malaya, North and South America, Philippines, Russian Turkestan, Siberia, Turkey

Domestic chicken

Le Roux (1926), South Africa
Poulsen *et al.* (2000), Ghana
Magwisha *et al.* (2002), Tanzania

Guineafowl

Le Roux (1926), South Africa

Numida meleagris

Fabiyi (1972), Nigeria
Hodasi (1976), Ghana
Vercruyse *et al.* (1985), Burkina Faso

2. *Tetrameres numida* Junker & Boomker 2007

Numida meleagris

Junker & Boomker (2007a), South Africa
Chabaud (1975) divided the genus *Tetrameres* into the two subgenera *Tetrameres* (*Tetrameres*) Creplin, 1846 and *Tetrameres* (*Microtetrameres*) Travassos, 1915. We adopt the view of Anderson (1992) and consider the two as valid genera.

Superfamily Acuarioidea

Family Acuariidae (Railliet, Henry & Sisoff, 1912, subfam.)

Subfamily Acuariinae Railliet, Henry & Sisoff, 1912

GENUS ACUARIA BREMSER, 1811

Cheilospirura auct.

Type species: *Acuaria anthuris* (Rudolphi, 1819)

1. *Acuaria hamulosa* (Diesing, 1851)

Spiroptera hamulosa Diesing, 1851; *Cheilospirura hamulosa* Diesing, 1861; *Spiroptera perforans* Centoscuti, 1911

Coturnix coturnix, *Gallus gallus*, *Meleagris*, pheasant
Yamaguti (1961), Cosmopolitan

Domestic chicken

Le Roux (1926), South Africa
Poulsen *et al.* (2000), Ghana
Magwisha *et al.* (2002), Tanzania

Numida meleagris

Fabiyi (1972), Nigeria
Hodasi (1976), Ghana

GENUS SYNHIMANTUS RAILLIET, HENRY & SISOFF, 1912

Type species: *Synhimantus laticeps* (Rudolphi, 1819)

1. *Synhimantus spiralis* (Linstow, 1883)

Dispharagus spiralis Linstow, 1883

Accipiter, *Alectoris*, *Bonasa*, *Ciconia*, *Colinus*, *Columba*, *Coracias*, *Corvus*, *Gallus*, *Meleagris*, *Metopidius*, *Numida meleagris*, *Passer*, *Perdix*, *Phasianus*, *Quiscalus*, *Turdus*, *Turdus migratorius*

Yamaguti (1961), Cosmopolitan

Numida meleagris

Fabiyi (1972), Nigeria
Hodasi (1976), Ghana
Vercruyse *et al.* (1985), Burkina Faso

GENUS DISPHARYNX RAILLIET, HENRY & SISOFF, 1912

Type species: *Dispharynx nasuta* (Rudolphi, 1819)

1. *Dispharynx nasuta* (Rudolphi, 1819)

Spiroptera nasuta Rudolphi, 1819

Passer domesticus

Yamaguti (1961), Europe

Gallus gallus

Yamaguti (1961), Africa, America, Australia, Ceylon, Cuba, Formosa

Domestic chicken, turkeys

Gibbons, Jones & Khalil (1996), no geographic data given

Numida meleagris

Verster & Ptasinska-Kloryga (1987), South Africa

HOST/PARASITE CHECK LIST

Order Tinamiformes

Family Tinamidae (Tinamous)

GENUS TINAMUS HERMANN, 1783

Subulura strongylina

GENUS CRYPTURELLUS BRABOURNE & CHUBB, 1914

Crypturus

Subulura strongylina

Order Galliformes

Domestic chicken

Mediorhynchus gallinarum
Postharmostomum gallinum
Choanotaenia infundibulum
Davainea proglottina
Echinolepis carioca
Hymenolepis cantaniana
Raillietina cohni
Raillietina echinobothrida
Raillietina tetragona
Skrjabinia cesticillus
Acuaria hamulosa
Aonchotheca caudinflata
Ascaridia galli
Ascaridia lineata
Ascaridia perspicillum
Capillaria anatis
Dispharynx nasuta
Eucoleus annulatus
Gongylonema ingluvicola
Heterakis brevispiculum
Heterakis dispar
Heterakis gallinarum
Oxyspirura mansoni
Subulura brumpti
Subulura differens
Subulura strongylina
Subulura suctoria
Syngamus trachea
Tetrameres fissispina

Gallinaceous birds, galliformes

Mediorhynchus gallinarum
Syngamus trachea

Family Numididae (Guineafowls)

Crested guineafowl

Postharmostomum gallinum

Guineafowl

Cotugnia crassa
Cotugnia digonopora
Numidella numida
Octopetalum numida
Porogynia paronai
Ascaridia galli
Ascaridia numidae
Tetrameres fissispina

GENUS NUMIDA LINNAEUS, 17661. *Numida meleagris* (Linnaeus, 1758) (Helmeted Guineafowl)

Phasianus meleagris
Numida meleagris galeatus Pallas, 1767
Numida galeata
Numida meleagris meleagris (Linnaeus, 1758)
Numida ptilorhyncha

Numida meleagris mitratus Pallas, 1767

Numida mitrata

Numida meleagris marungensis Schalow, 1884

Numida frommi, *Numida marungensis*, *Numida meleagris bodalyae*, *Numida meleagris frommi*, *Numida meleagris maxima*, *Numida meleagris rikwae*, *Numida mitrata frommi*, *Numida mitrata maxima*, *Numida mitrata rikwae*, *Numida rikwae*

Mediorhynchus empodius
Mediorhynchus gallinarum
Mediorhynchus numidae
Mediorhynchus selengensis
Mediorhynchus taeniatus
Dicrocoelium macrostomum
Lutztrema sp.
Postharmostomum gallinum
Abuladzugnia gutterae
Abuladzugnia transvaalensis
Choanotaenia infundibulum
Cotugnia crassa
Cotugnia digonopora
Cotugnia meleagridis
Cotugnia tuliensis
Davainea nana
Davainea paucisegmentata
Davainea paucisegmentata var. *dahomeensis*
Davainea proglottina
Echinolepis carioca
Hispaniolepis falsata
Hispaniolepis fedtschenkoi
Hispaniolepis hilmyi
Hispaniolepis villosa
Hymenolepis cantaniana
Idiogenes sp.
Metroliaesthes lucida
Numidella numida
Octopetalum gutterae
Octopetalum numida
Ortleppolepis multiuncinata
Porogynia paronai
Raillietina angusta
Raillietina cohni
Raillietina echinobothrida
Raillietina pintneri
Raillietina steinhardti
Raillietina tetragona
Raillietina tetragonoides
Raillietina toyohashiensis
Skrjabinia cesticillus
Skrjabinia deweti
Acuaria hamulosa
Ascaridia calcarata
Ascaridia compar
Ascaridia galli
Ascaridia lineata
Ascaridia numidae
Ascaridia perspicillum
Aonchotheca caudinflata
Capillaria anatis
Cyrnea eurycerca

Cyrnea parroti
Eucoleus annulatus
Gongylonema congolense
Gongylonema ingluvicola
Gongylonema sumani
Hadjelia truncata
Heterakis brevispiculum
Heterakis dispar
Heterakis gallinarum
Heterakis vesicularis
Oxyspirura mansoni
Sicarius caudatus
Sicarius renatae
Subulura acuticauda
Subulura brumpti
Subulura dentigera
Subulura differens
Subulura strongylina
Subulura suctoria
Strongyloides avium
Syngamus trachea
Dispharynx nasuta
Synhimantus spiralis
Tetrameres fissispina
Tetrameres numida

GENUS: GUTTERA WAGLER, 1832

Numidella numida
Raillietina pintneri
Ascaridia numidae

1. *Guttera edouardi* (Hartlaub, 1867) (Crested Guinea-fowl)

Numida edouardi (Hartlaub, 1867); *Guttera pucherani edouardi* (Hartlaub, 1867)

Mediorhynchus taeniatus
Abuladzugnia gutterae
Davainea nana
Metroliasthes lucida
Octopetalum gutterae
Octopetalum numida
Ortleppolepis multiuncinata
Porogynia paronai
Raillietina pintneri
Raillietina steinhardtii
Raillietina tetragona
Gongylonema congolense
Hadjelia truncata
Subulura suctoria

GENUS: ACRYLLIUM GRAY, 1840

Heterakis gallinarum

1. *Acryllium vulturinum* Gray, 1840 (Vulturine Guinea-fowl)

Cotugnia shohoi
Raillietina somalensis
Heterakis tenuicauda
Sicarius renatae

Family ODONTOPHORIDAE (New World quails)

GENUS OREORTYX BAIRD, 1858

Ortyx in Yamaguti (1961)

1. *Oreortyx pictus* (Douglas, 1829) (Mountain Quail)

Ortyx picta
Ascaridia compar
Heterakis vesicularis

GENUS CALLIPEPLA WAGLER, 1832

Lophortyx
Subulura strongylina

GENUS COLINUS GOLDFUSS, 1820

Ascaridia galli
Eucoleus annulatus
Heterakis vesicularis
Heterakis gallinarum
Subulura strongylina
Synhimantus spiralis

1. *Colinus virginianus* (Linnaeus, 1758) (Northern Bob-white)

Tetrao virginianus
Echinolepis carioca
Hymenolepis cantaniana
Skrjabinia cestacillus

- 1a. *Colinus virginianus texanus* Lawrence, 1853
Subulura brumpti

GENUS ODONTOPHORUS VIEILLOT, 1816

Subulura strongylina

1. *Odontophorus capueira* (Spix, 1825) (Spot-winged Wood-quail)

Perdix capueira
Subulura strongylina

Family PHASIANIDAE (Partridges, francolins, spurfowls, pheasants, etc.)

Partridge

Ascaridia lineata

Pheasant

Acuaria hamulosa
Gongylonema ingluvicola

Turkey

Dispharynx nasuta

GENUS MELEAGRIS LINNAEUS, 1758

Acuaria hamulosa
Ascaridia galli
Ascaridia lineata
Eucoleus annulatus
Gongylonema ingluvicola
Heterakis vesicularis
Heterakis gallinarum
Synhimantus spiralis

Tetrameres fissispina

1. *Meleagris gallopavo* Linnaeus, 1758 (Wild Turkey, Common Turkey)

Echinolepis carioca
Hymenolepis cantaniana
Metroliasthes lucida
Numidella numida
Raillietina echinobothrida
Raillietina tetragona
Skrjabinia cesticillus
Ascaridia perspicillum
Oxyspirura mansoni
Subulura brumpti
Tetrameres fissispina

2. *Meleagris ocellata* Cuvier, 1820 (Ocellated Turkey)

Agriocharis ocellata
Ascaridia galli

GENUS *BONASA* STEPHENS, 1819

Ascaridia galli
Ascaridia lineata
Eucoleus annulatus
Heterakis gallinarum
Subulura strongylina
Synhimantus spiralis

1. *Bonasa umbellus* (Linnaeus, 1766) (Ruffed Grouse)

Tetrao umbellus
Davainea proglottina
Echinolepis carioca

GENUS *TETRASTES* KEYSERLING & BLASIUS, 1840

Ascaridia compar

1. *Tetrastes bonasia* (Linnaeus, 1758) (Hazel Grouse)

Bonasa bonasia, *Bonasia bonasia*, *Tetrao bonasia*
Hispaniolepis fedtschenkoi
Hymenolepis cantaniana
Skrjabinia cesticillus

- 1a. *Tetrastes bonasia rupestris* (Brehm, 1831)

Ascaridia perspicillum

GENUS *TETRAO* LINNAEUS, 1758

Aonchotheca caudinflata
Ascaridia compar
Ascaridia galli
Eucoleus annulatus
Heterakis vesicularis
Heterakis gallinarum
Subulura strongylina

1. *Tetrao urogallus* Linnaeus, 1758 (Western Capercaillie)

Tetrao major
Skrjabinia cesticillus
Ascaridia perspicillum

2. *Tetrao parvirostris* Bonaparte, 1856 (Black-billed Capercaillie)

Tetrao urogalloides

Hymenolepis cantaniana

GENUS *LYRURUS* SWAINSON, 1832

Aonchotheca caudinflata
Ascaridia compar
Ascaridia galli
Capillaria anatis
Eucoleus annulatus
Heterakis gallinarum

1. *Lyrurus tetrix* (Linnaeus, 1758) (Black Grouse)

Tetrao tetrix
Hispaniolepis fedtschenkoi
Skrjabinia cesticillus

GENUS *TYMPANUCHUS* GLOGER, 1841

Cupidonia
Ascaridia lineata
Heterakis gallinarum

1. *Tympanuchus phasianellus* (Linnaeus, 1758) (Sharp-tailed Grouse)

Pedioecetes phasianellus (Linnaeus, 1758), *Tetrao phasianellus*

Ascaridia galli
Ascaridia lineata
Heterakis gallinarum
Subulura strongylina

GENUS *LAGOPUS* BRISSON, 1760

Aonchotheca caudinflata
Heterakis gallinarum
Heterakis vesicularis

1. *Lagopus lagopus* (Linnaeus, 1758) (Willow Ptarmigan)

Tetrao lagopus
Raillietina tetragona
Skrjabinia cesticillus
Subulura suctoria

- 1a. *Lagopus lagopus scotica* (Latham, 1787)

Lagopus scotica
Skrjabinia cesticillus

2. *Lagopus muta* (Montin, 1781) (Rock Ptarmigan)

Raillietina tetragona

GENUS *TETRAOGALLUS* GRAY, 1832

1. *Tetraogallus caucasicus* (Pallas, 1811) (Caucasian Snowcock)

Tetrao caucasica
Hispaniolepis fedtschenkoi

2. *Tetraogallus himalayensis* Gray, 1843 (Himalayan Snowcock)

Megaloperdix nigelli
Hispaniolepis fedtschenkoi

GENUS *ALECTORIS* KAUP, 1829

Caccabis in Yamaguti (1961)

Ascaridia compar
Ascaridia galli
Ascaridia numidae
Cyrnea eurycerca
Heterakis dispar
Heterakis gallinarum
Synhimantus spiralis
Tetrameres fissispina

1. *Alectoris barbara* (Bonnotterre, 1792) (Barbary Partridge)

Caccabis petrosa, *Perdix barbara*
Cyrnea parroti

2. *Alectoris graeca* (Meisner, 1804) (Rock Partridge)

Perdix graeca
Davainea proglottina
Echinolepis carioca
Metroliasthes lucida
Heterakis tenuicauda
Subulura brumpti
Subulura differens

- 2a. *Alectoris graeca saxatilis* (Bechstein, 1805)

Caccabis saxatilis chukar
Heterakis tenuicauda

Lepage (2007) states that the original *Alectoris graeca* has been split into four species, namely *Alectoris graeca*, *Alectoris chukar* (Gray, 1830), *Alectoris philbyi* Lowe, 1934 and *Alectoris magna* (Prjevalski, 1876).

3. *Alectoris rufa* (Linnaeus, 1758) (Red-legged Partridge)

Caccabis rufa, *Coturnix rufa*, *Tetrao rufus*
Metroliasthes lucida
Cyrnea eurycerca
Cyrnea parroti

GENUS *FRANCOLINUS* STEPHENS, 1819

Ascaridia lineata
Cyrnea eurycerca
Heterakis gallinarum

GENUS *SCLEROPTILA* BLYTH, 1852

1. *Scleroptila levaillantii* (Valenciennes, 1825) (Red-winged Francolin)

Francolinus levaillantii, *Perdix levaillantii*
Gongylonema congolense

GENUS *PTERNISTIS* WAGLER, 1832

Subulura suctoria

1. *Pternistis natalensis* (Smith, 1834) (Natal Spurfowl)

Francolinus natalensis, *Pternistes natalensis*
Porogynia paronai

2. *Pternistis bicalcaratus* (Linnaeus, 1766) (Double-spurred Spurfowl)

Francolinus bicalcaratus, *Tetrao bicalcaratus*
Heterakis brevispiculum
Subulura differens

GENUS *PERDIX* BRISSON, 1760

Aonchotheca caudinflata
Ascaridia compar
Ascaridia galli
Capillaria anatis
Eucoleus annulatus
Heterakis vesicularis
Heterakis gallinarum
Subulura strongylina
Synhimantus spiralis
Tetrameres fissispina

1. *Perdix perdix* (Linnaeus, 1758) (Grey Partridge)

Tetrao perdix
Davainea proglottina
Hymenolepis cantaniana
Metroliasthes lucida
Raillietina echinobothrida
Skrjabinia cesticillus
Subulura brumpti

- 1a. *Perdix perdix canescens* Buturlin, 1906

Subulura differens

GENUS *COTURNIX* BONNATERRE, 1791

Aonchotheca caudinflata
Ascaridia compar
Cyrnea eurycerca
Heterakis gallinarum
Heterakis vesicularis
Subulura suctoria

1. *Coturnix coturnix* (Linnaeus, 1758) (Common Quail)

Tetrao coturnix
Dicrocoelium macrostomum
Echinolepis carioca
Hymenolepis cantaniana
Metroliasthes lucida
Skrjabinia cesticillus
Acuaria hamulosa
Subulura suctoria

GENUS *ITHAGINIS* WAGLER, 1832

Ascaridia galli

GENUS *TRAGOPAN* CUVIER, 1829

Ceriornis
Heterakis gallinarum

GENUS *LOPHOPHORUS* TEMMINCK, 1813

Heterakis gallinarum
Heterakis vesicularis

GENUS *GALLUS* BRISSON, 1760

Aonchotheca caudinflata
Ascaridia compar
Ascaridia lineata
Eucoleus annulatus
Gongylonema congolense

Gongylonema ingluvicola
Heterakis vesicularis
Strongyloides avium
Subulura strongylina
Synhimantus spiralis
Tetrameres fissispina

1. *Gallus gallus* (Linnaeus, 1758) (Red Junglefowl)

Gallus ferrugineus, *Phasianus gallus*
Davainea proglottina
Echinolepis carioca
Hispaniolepis fedtschenkoi
Hymenolepis cantaniana
Metroliasthes lucida
Raillietina cohni
Raillietina echinobothrida
Raillietina tetragona
Skrjabinia cesticillus
Acuaria hamulosa
Dispharynx nasuta
Gongylonema sumani
Oxyspirura mansoni

1a. *Gallus gallus bankiva* Temminck, 1813

Metroliasthes lucida
Raillietina echinobothrida

GENUS LOPHURA FLEMING, 1822

Gennaeus
Heterakis gallinarum

1. *Lophura nycthemera* (Linnaeus, 1758) (Silver Pheasant)

Euplocamus nycthemerus, *Gennaeus nycthemerus*, *Phasianus nycthemerus*
Heterakis vesicularis

GENUS SYRMATICUS WAGLER, 1832

Graphophasianus
Eucoleus annulatus

1. *Syrmaticus soemmeringii* (Temminck, 1830) (Copper Pheasant)

Graphophasianus soemmeringii, *Phasianus soemmeringii*
Heterakis gallinarum

GENUS PHASIANUS LINNAEUS, 1758

Aonchotheca caudinflata
Ascaridia galli
Ascaridia lineata
Capillaria anatis
Cyrnea eurycerca
Eucoleus annulatus
Heterakis gallinarum
Synhimantus spiralis

1. *Phasianus colchicus* Linnaeus, 1758 (Common Pheasant, Ring-necked Pheasant)

Hymenolepis cantaniana
Raillietina echinobothrida

Skrjabinia cesticillus
Heterakis vesicularis
Subulura suctoria

1a. *Phasianus colchicus mongolicus* Brandt, 1844

Phasianus mongolicus turkestanicus
Subulura suctoria

1b. *Phasianus colchicus principalis* Sclater, 1885

Phasianus principalis
Subulura suctoria

GENUS CHRYSOLOPHUS GRAY, 1834

Thaumalea
Aonchotheca caudinflata
Eucoleus annulatus
Heterakis gallinarum

GENUS POLYPLECTRON TEMMINCK, 1807

Heterakis vesicularis

GENUS PAVO LINNAEUS, 1758

Heterakis gallinarum
Heterakis vesicularis

1. *Pavo cristatus* Linnaeus, 1758 (Indian Peafowl)

Hymenolepis cantaniana
Raillietina tetragona
Ascaridia perspicillum
Oxyspirura mansoni

2. *Pavo muticus* Linnaeus, 1766 (Green Peafowl)

Raillietina tetragona

Order Anseriformes

Syngamus trachea

Family ANATIDAE (Ducks, geese and swans)

Duck

Ascaridia galli
Ascaridia lineata

Goose

Ascaridia lineata

GENUS ANSER BRISSON, 1760

Cotugnia digonopora
Ascaridia lineata
Capillaria anatis
Heterakis dispar
Heterakis gallinarum

1. *Anser cygnoides* (Linnaeus, 1758) (Swan Goose)

Cygnopsis cygnoides
Heterakis dispar

GENUS BRANTA SCOPOLI, 1769

Heterakis dispar

1. *Branta bernicla* (Linnaeus, 1758) (White-bellied Brant)

Anas bernicla
"Bernicla"
Heterakis dispar

GENUS CYGNUS BECHSTEIN, 1803

1. *Cygnus atratus* (Latham, 1790) (Australian Black Swan)
Chenopsis atrata
Heterakis vesicularis
2. *Cygnus melanocoryphus* (Molina, 1782)
Tetrameres fissispina

GENUS CHLOEPHAGA EYTON, 1838

Heterakis dispar

GENUS TADORNA BOIE, 1822

Todorna
Heterakis dispar

GENUS CAIRINA FLEMING, 1822

Ascaridia galli
Heterakis dispar
Heterakis gallinarum

1. *Cairina moschata* (Linnaeus, 1758) (Muscovy Duck)
Gongylonema congolense

GENUS ANAS LINNAEUS, 1758

Ascaridia lineata
Heterakis dispar
Heterakis gallinarum
Heterakis vesicularis
Subulura brumpti

1. *Anas platyrhynchos* Linnaeus, 1758 (Mallard)
Anas boschas
Tetrameres fissispina
2. *Anas clypeata* Linnaeus, 1758 (Northern Shoveler)
Anas spathula, *Spatula clypeata*
Tetrameres fissispina
3. *Anas acuta* Linnaeus, 1758 (Northern Pintail)
Dafila acuta
Ascaridia perspicillum
Tetrameres fissispina

According to Lepage (2007) *A. acuta* has been split into *A. acuta* and *Anas eatoni*, but some authors consider *A. eatoni* a subspecies of *A. acuta*. Peterson (1999) lists the two as separate species.

4. *Anas querquedula* Linnaeus, 1758 (Garganey)
Querquedula querquedula
Capillaria anatis
Tetrameres fissispina

GENUS AYTHYA BOIE, 1822

1. *Aythya ferina* (Linnaeus, 1758) (Common Pochard)

Anas ferina, *Aristonetta ferina*, *Nyroca ferina*
Tetrameres fissispina

GENUS SOMATERIA LEACH, 1819

1. *Somateria mollissima* (Linnaeus, 1758) (Common Eider)
Anas mollissima
Tetrameres fissispina

GENUS MELANITTA BOIE, 1822

- Oedemia*, *Oidemia*
Capillaria anatis
1. *Melanitta fusca* (Linnaeus, 1758) (Velvet Scoter)
Anas fusca, *Oidemia fusca*
Tetrameres fissispina

GENUS CLANGULA LEACH, 1819

1. *Clangula hyemalis* (Linnaeus, 1758) (Oldsquaw, Long-tailed Duck)
Anas hyemalis, *Harelda hyemalis*, *Ereunetes occidentalis*
Capillaria anatis

GENUS BUCEPHALA BAIRD, 1858

1. *Bucephala clangula* (Linnaeus, 1758) (Common Goldeneye)
Anas clangula, *Clangula clangula*, *Glaucionetta clangula*
Tetrameres fissispina

GENUS MERGUS LINNAEUS, 1758

Merganser
Capillaria anatis

1. *Mergus merganser* Linnaeus, 1758 (Common Merganser)
Tetrameres fissispina

Order Turniciformes

Family TURNICIDAE (Buttonquail)

GENUS TURNIX BONNATERRE, 1791

1. *Turnix suscitator* (Gmelin, 1789) (Barred Buttonquail)
Tetrao suscitator
Hymenolepis cantaniana

Order Piciformes

Syngamus trachea

Order Galbuliformes

Family BUCCONIDAE (Puffbirds)

GENUS BUCCO BRISSON, 1760

Subulura strongylina

GENUS MALOCOPTILA GRAY, 1841

Subulura strongylina

GENUS *NONNULA* SCLATER, 1854*Subulura strongylina***GENUS *MONASA* VIEILLOT, 1816***Subulura strongylina***GENUS *CHELIDOPTERA* GOULD, 1837***Subulura strongylina***Order Bucerotiformes****Family BUCEROTIDAE (Hornbills)****GENUS *ACEROS* HODGSON, 1844**

1. *Aceros corrugatus* (Temminck, 1832) (Wrinkled Hornbill)

Buceros corrugatus, *Rhynoceros corrugatus**Hadjelia truncata***GENUS *TOCKUS* LESSON, 1830**

1. *Tockus erythrorhynchus* (Temminck, 1823) (Red-billed Hornbill)

*Buceros erythrorhynchus**Hadjelia truncata*

2. *Tockus fasciatus semifasciatus* (Hartlaub, 1855) (Allied Hornbill)

*Lophoceros semifasciatus**Hadjelia truncata*

3. *Tockus leucomelas* (Liechtenstein, 1842) (Southern Yellow-billed Hornbill)

*Buceros leucomelas**Hadjelia truncata*

Some authors consider *T. leucomelas* a subspecies of *Tockus flavirostris* (Rüppell, 1853) (Lepage 2007)

Order Upupiformes**Family UPUPIDAE (Hoopoes)****GENUS *UPUPA* LINNAEUS, 1758**

1. *Upupa epops* Linnaeus, 1758 (Hoopoe)

*Hadjelia truncata***Family CORACIIDAE (Rollers)****GENUS *CORACIAS* LINNAEUS, 1758***Synhimantus spiralis*

1. *Coracias benghalensis* (Linnaeus, 1758) (Indian Roller)

*Corvus benghalensis**Hadjelia truncata***GENUS *HALCYON* SWAINSON, 1821**

1. *Halcyon smyrnensis* (Linnaeus, 1758) (White-throated Kingfisher)

*Hadjelia truncata***Family MEROPIDAE (Bee-eaters)****GENUS *MEROPS* LINNAEUS, 1758***Cyrnea eurycerca***Order Cuculiformes****Family CUCULIDAE (Cuckoos, coucals, anis, roadrunners, couas, etc.)****GENUS *CUCULUS* LINNAEUS, 1758***Subulura strongylina***GENUS *CENTROPUS* ILLIGER, 1811**

1. *Centropus phasianinus* (Latham, 1802) (Pheasant Coucal)

*Cuculus phasianinus**Subulura differens***Order Strigiformes****Family STRIGIDAE (Typical owls)****GENUS *STRIX* LINNAEUS, 1758***Heterakis dispar**Heterakis gallinarum***GENUS *SURNIA* DUMERIL, 1805***Heterakis dispar***GENUS *GLAUCIDIUM* BOIE, 1826***Heterakis dispar***Family NYCTIBIIDAE (Potoos)****GENUS *NYCTIBIUS* VIEILLOT, 1816***Subulura suctoria***Family CAPRIMULGIDAE (Nightjars)****GENUS *PODAGER* WAGLER, 1832***Subulura strongylina**Subulura suctoria***GENUS *CAPRIMULGUS* LINNAEUS, 1758***Subulura strongylina**Subulura suctoria***Order Columbiformes****Family COLUMBIDAE (Pigeons and doves)****Pigeon***Ascaridia lineata***GENUS *COLUMBA* LINNAEUS, 1758***Aonchotheca caudinflata**Synhimantus spiralis*

1. *Columba livia* Gmelin, 1785 (Rock Pigeon)

Cotugnia digonopora
Raillietina echinobothrida
Hadjelia truncata
Tetrameres fissispina

GENUS STREPTOPELIA BONAPARTE, 1855

- Spilopelia*
Ascaridia galli
1. *Streptopelia orientalis* (Latham, 1790) (Oriental Turtle-Dove)
Columba orientalis, *Turtur orientalis*
Subulura brumpti

Order Gruiformes

Family RALLIDAE (Rails, crakes, moorhens and coots)

GENUS FULICA LINNAEUS, 1758

1. *Fulica atra* Linnaeus, 1758 (Common Coot)
Tetrameres fissispina

Family OTIDIDAE (Bustards and korhaans)

Yamaguti (1961) lists *Aonchotheca caudinflata*, *Heterakis gallinarum* and *Heterakis vesicularis* from *Otis* without giving the host's species name. It is therefore not clear whether *Otis* refers to the current genus *Otis*, *Ardeotis*, *Neotis* or *Chlamydotis*.

Otidiformes in Yamaguti (1961)
Syngamus trachea

GENUS OTIS LINNAEUS, 1758

1. *Otis tarda* Linnaeus, 1758 (Great Bustard)
Mediorhynchus taeniatus

GENUS ARDEOTIS LE MAOUT, 1853

1. *Ardeotis arabs* (Linnaeus, 1758) (Arabian Bustard)
Choriotis arabs, *Otis arabs*
Mediorhynchus empodius
Mediorhynchus taeniatus

GENUS CHLAMYDOTIS LESSON, 1839

Houbara

Hetrakis gallinarum

According to Lepage (2007) the common name Houbara has been split into *Chlamydotis undulata* and *Chlamydotis macqueenii*.

1. *Chlamydotis undulata* (Jacquin, 1784) (Houbara Bustard)
Otis houbara, *Psophia undulata*
Mediorhynchus taeniatus
Hispaniolepis falsata
2. *Chlamydotis macqueenii* Gray, 1832 (Macqueen's Bustard)
Otis macqueenii
Mediorhynchus taeniatus

Order Charadriiformes

Family PTEROCLIDIAE (Sandgrouse)

GENUS PTEROCLES TEMMINCK, 1815

Calopteroles

Heterakis gallinarum

1. *Pterocles exustus* Temminck, 1825 (Chestnut-bellied Sandgrouse)
Pteroclidurus exustus, *Pterocles senegalensis*
Raillietina cohni
Lepage (2007) lists *Pterocles senegalensis* as synonym for *Pterocles exustus*.
2. *Pterocles orientalis arenarius* (Pallas, 1775) (Eastern Black-bellied Sandgrouse)
Pterocles arenarius
Raillietina cohni
Lepage (2007) and Peterson (1999) list *Pterocles arenarius* as subspecies of *Pterocles orientalis* (Linnaeus, 1758).

Family JACANIDAE (Jacanas)

GENUS METOPIDIUS WAGLER, 1832

Synhimantus spiralis

Family BURHINIDAE (Thick-knees)

GENUS BURHINUS ILLIGER, 1811

Oedicnemus

Subulura suctoria

1. *Burhinus oedicnemus* (Linnaeus, 1758) (Eurasian Thick-knee)
Charadrius oedicnemus, *Oedicnemus crepitans*
Mediorhynchus taeniatus

Family CHARADRIIDAE

(Plovers, dotterels, lapwings)

GENUS VANELLUS BRISSON, 1760

1. *Vanellus cinereus* (Blyth, 1842) (Grey-headed Lapwing)
Hoplopterus cinereus, *Microsarcops cinereus*, *Pluvianus cinereus*
Davainea nana

Order Falconiformes

Family ACCIPITRIDAE (Eagles, hawks, buzzards, kites, vultures)

GENUS ACCIPITER BRISSON, 1760

Synhimantus spiralis

Order Ciconiiformes

Family PODICIPEDIDAE (Grebes)

GENUS TACHYBAPTUS REICHENBACH, 1853

1. *Tachybaptus novaehollandiae* (Stephens, 1826) (Australian Grebe)

Podiceps fluvialis, *Podiceps novaehollandiae*
Tetrameres fissispina

Family ARDEIDAE (Herons, egrets and bitterns)

“Ardeiformes”

Syngamus trachea

GENUS ARDEA LINNAEUS, 1758

Mediorhynchus empodius

GENUS NYCTICORAX FORSTER, 1817

1. *Nycticorax nycticorax* (Linnaeus, 1758) (Black-crowned Night-Heron)

Ardea nycticorax

Tetrameres fissispina

Family PELECANIDAE (Pelicans)

“Pelicaniformes”

Syngamus trachea

Family CICONIIDAE (Storks)

GENUS CICONIA BRISSON, 1760

Synhimantus spiralis

Order Passeriformes

Syngamus trachea

Family CORVIDAE (Crows and ravens)

GENUS CORVUS LINNAEUS, 1758

Heterakis gallinarum

Synhimantus spiralis

Family PYCNONOTIDAE

GENUS PYCNONOTUS BOIE, 1826

1. *Pycnonotus capensis* (Linnaeus, 1766) (Cape Bulbul)

Sicarius caudatus

Family MUSCICAPIDAE (Old World flycatchers)

GENUS TURDUS LINNAEUS, 1758

Aonchotheca caudinflata

Synhimantus spiralis

1. *Turdus viscivorus* Linnaeus, 1758 (Mistle Thrush)
Ascaridia perspicillum
2. *Turdus migratorius* Linnaeus, 1766 (American Robin)
Planesticus migratorius
Synhimantus spiralis

Family STURNIDAE (Starlings)

GENUS STURNUS

Aonchotheca caudinflata

Family PASSERIDAE (Old World sparrows, sownfinches and relatives)

GENUS PASSER BRISSON, 1760

Aonchotheca caudinflata

Synhimantus spiralis

1. *Passer domesticus* (Linnaeus, 1758) (House Sparrow)
Fringilla domestica
Dispharynx nasuta

GENUS EUPLECTES SWAINSON, 1829

1. *Euplectes orix* (Linnaeus, 1758) (Red Bishop)
Pyromelana oryx
Subulura differens

Family FRINGILLIDAE (Canaries and buntings)

GENUS QUISCALUS VIEILLOT, 1816

Synhimantus spiralis

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