

# High Altitude Isopoda, Arachnida and Myriapoda in the Old World (supplementa and corrigenda 2008-2016)

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**Abstract:** After the publication of my monograph (BERON, 2008) appeared many new papers containing data on Arachnida and Myriapoda found in the Old World at or above 2200 m. In this supplement are added 12 sp. of Opilions, 37 sp. of spiders, and 74 sp. of Diplopoda. Several changes occurred in the taxonomy of some groups, following taxonomic revisions. Several genera of Opiliones are no more in Phalangiidae, but in Sclerosomatidae, Fuhrmanodesmidae became synonyme of Trichopolydesmidae, etc. "Palpatores" are now distributed between the suborders Eupnoi and Dyspnoi. Several specialists, and especially Golovatch, published many new taxa of high mountain Diplopoda. Again Golovatch synonymized several genera of Diplopoda (*Martensosoma*, *Nepalomorpha*, *Parorthomorpha*, *Armolites*, *Orophosoma*), known from the high mountains, under *Delartrum* Attems. For many taxa has been "raised" the upper limit of distribution and they have been published from other mountains.

**Key Words:** Arachnida, Myriapoda, high altitude, Old World, supplementa, corrigenda

Underlined are taxa not included in the monograph of BERON (2008)

## The mountain systems of the Old World and the Isopoda, Arachnida and Myriapoda recorded therein

### Pyrenees and the mountains of Iberian Peninsula

Diplopoda

New ref.: GILGADO et al. (2015)

Chordeumatida

Fam. **Opisthocheiridae**

*Ceratosphys cryodeserti* Gilgado, Mauriès et  
Enghoff – Sierra Nevada

Alps

Arachnida

Araneae

New ref.: TANASEVITCH (2011a, 2011b, 2013)

Fam. Linyphiidae

*Agyneta nigripes* (Simon) – 1900 – 2580 m

*Erigone remota* L. Koch – 2650 m

*E. tenuimana* Simon – up to 2580 m

Caucasus

Arachnida

Opiliones

New ref.: SNEGOVAYA (1999, 2004, 2010, 2014)

Fam. Phalangiidae

*Odiellus bieniaszi* Kulczynski – up to 3000 m

*Opilio lederi* Roewer – up to 3000 m

*O. parietinus* (De Geer) – up to 3000 m  
(Azerbaijan)

*O. redikorzevi* Roewer – 2400 m

*Phalangium opilio* L. – up to 3000 m

*Ph. punctipes* L. Koch – up to 3000 m

Araneae

New ref.: LOGUNOV & DEMIR (2006)

Fam. Thomisidae

*Xysticus bacurianensis* Mccheidze – 3000 m  
(Azerbaijan), 2900 m (Georgia)

Myriapoda

Diplopoda

New ref.: GOLOVATCH, EVSYUKOV & REIP (2016)

Fam. Polydesmidae

*Brachydesmus assimilis* Lohmander – 2800 m

*B. kalischewskyi* Lignau – 2400 m

*Polydesmus lignaui* Lohmander – 2800 m

## Mountains of Turkey, Armenia, Lebanon, Iran, Kopet Dagh and Arabian Peninsula

Arachnida

Araneae

New ref.: LOGUNOV & DEMIR (2006), SEYYAR,  
DEMIR, TOPÇU & TAŞDEMIR (2006)

- Fam. Gnaphosidae  
*Phaeocedus braccatus* (L. Koch) – 2300 m  
(Erciyes)
- Fam. Thomisidae  
*Xysticus bacurianensis* Mchedze – 2200 m  
*X. cristatus* (Clerck) – 2200 m
- Mountains of Afghanistan, Pakistan, Karakorum, Tibet, Pamir, Kunlun and Tien Shan (from the border between Iran and Afghanistan to 120°E)**
- Arachnida**
- Opiliones**  
**New or ommited ref.:** STARĘGA (1986), STARĘGA & SNEGOVAYA (2008a)
- Eupnoi**  
Fam. Phalangiidae  
*Homolophus gricenkoi* Staręga et Snegovaya – 2000 -3000 m (Tadzhikistan)  
*H. andreevae* Staręga et Snegovaya – up to 4670 m (Pamir)  
*Pamiropilio naukat* Staręga et Snegovaya – 3000-3300 m (Kyrgyzstan, Alayskiy Hrebet)
- Dyspnoi**  
Fam. Nemastomatidae  
*Mediostoma* (?) *pamiricum* Staręga, 1986-3100 m (Pamir)
- Araneae**  
**New ref.:** KOK, LOTZ & HADDAD (2004), TANASEVITCH (2011b)
- Fam. Linyphiidae  
*Acartauchenius himalayensis* Tanasevitch – 2500 m (Karakorum)  
*Agyneta nigripes* (Simon) – 2635 m (Karakorum)  
*Archaraeoncus prospiciens* (Thorell) – 2700-3000 m (Karakorum)  
*Caviphantes pseudosaxetorum* Wunderlich – 550-2500 m (Karakorum)  
*Ceratinella wideri* (Thorell) – 2500-3100 m (Karakorum)  
*Gongylidiellum confusum* Thaler – 1600-2700 m (Karakorum)  
*Maso sundevalli* (Westring) – 2200 – 2300 m (Karakorum)  
*Pelecopsis indus* Tanasevitch – 2300 m (Karakorum)  
*Piniphantes himalayensis* (Tanasevitch) – 2800 m (Karakorum)  
*Porrhomma pygmaeum* (Blackwall) – 2480 m (Karakorum)  
*Prinerigone vagans* (Audouin) – 1700-2700 m (Karakorum)  
*cotargus pilosus* Simon – 1400-2450 m (Karakorum)
- Tiso incisus* Tanasevitch – 1300-2500 m (Karakorum)
- Acari**  
**Newref.:** DANIEL (1973), DANIEL, STEKOLNIKOV, HAKIMITABAR & SABOORI (2010), JING, SOLHOY, WANG, VOLLAN & XU (2005)
- Acari, known from the described area at or above 2200 m (suppl.):
- Acariformes**  
**Prostigmata**  
Fam. Trombiculidae  
*Microtrombicula gratiosa* Schluger et Kudryashova – Hindu Kush, 2950 m  
*M. similata* Schluger et Amanguliev – Hindu Kush, 3080 m  
*M. vacillata* Fernandes et Kulkarni – Hindu Kush, 3080 m  
*Neotrombicula lubrica* Kudryashova – Hindu Kush, 2950-3990 m  
*Leptotrombidium silvaticum* Hushcha et Schluger – Hindu Kush, 2782 m  
*Montivagum dihumerale* (Traub et Nadchatram) – Hindu Kush, 3990 m  
*M. latum* (Schluger et Kudryashova) – Hindu Kush, 2950-3990 m  
*M. raropinne* (Schluger) – Hindu Kush, 3100 m  
*Euschoengstia meshhedensis* Kudryashova, Neronov et Farhang-Azad – Hindu Kush, 2950 – 3990 m  
*Brunehaldia lucida* Schluger – Hindu Kush, 2950 m  
*Shunsennia oudemansi* (Schluger) – 2950 – 4550 m
- Himalaya**  
(East of Indus and South and West of Tzangpo, or Brahmaputra)
- New research:**  
B. Petrov collected many different animals during his several climbing expeditions in the Himalaya.
- Notes on Isopoda, Arachnida and Myriapoda**
- Arachnida**
- Scorpiones**  
**New ref.:** ZAMBRE, SANAP & MIRZA (2014)
- Fam. Euscorpiidae  
*Scorpiops spitiensis* Zambre, Sanap et Mirza – Himalaya, 4200 m
- Araneae**  
**New ref.:** JASTRĘBSKI, 2010, 2011, OVTCHINNIKOV, AHMAD & İNAYATULLAH (2008), TANASEVITCH (2011b), WANG & ZHU (2008)
- Some spiders in the Himalaya found at or above 2200 m after 2008 are:

Fam. Amaurobiidae  
*Himalmartensis ausobskyi* Wang et Zhu – 1770-  
3000 m  
*H. martensi* Wang et Zhu – 1400-2900 m  
*H. nepalensis* Wang et Zhu – 1000-2600 m  
Fam. Gnaphosidae  
*Gnaphosa pakistanica* Ovtchinnikov, Ahmad et  
Inayatullah – 4100 m  
Fam. Linyphiidae  
*Anguliphantes nepalsioides* Tanasevitch – 2500-  
2600 m  
*Gongylidiellum confusum* Thaler – up to 3200 m  
(Kashmir)  
*Indophantes tonglu* Tanasevitch – 2500-2700 m  
*Pelecopsis indus* Tanasevitch – 2250 m  
*Tapinocyboides bengalensis* Tanasevitch – 3100 m  
*Tiso incisus* Tanasevitch – 1900 – 2450 m  
*T.(?) indianus* Tanasevitch – 2500 – 2600 m  
*Walckenaeria martensi* Wunderlich = *W. nepalensis* Wund. (syn. by Tanasevitch, 2011b)

**Acari**

**New and omitted ref.:** DANIEL (1973), DANIEL & STEKOLNIKOV (2009), DANIEL, STEKOLNIKOV, HAKIMITABAR & SABOORI (2010), ERMILOV & MARTENS (2014), FERNANDES & KULKARNI (2003)

Some of the Acari, found in Himalaya at or above 2200 m after 2008, are:

**Acariformes**  
**Prostigmata**  
Fam. Trombiculidae  
*Brunehaldia lucida* Schluger – 2950 m  
*Cheladonta ikaoensis* Sasa et al. – 3450-4000 m  
*Doloisia vlastae* Daniel et Stekolnikov – 3450 m  
*Euschoengastia meshhedensis* Kudryashova et al. – 2950-3990 m  
*Leptotrombidium angkamii* Daniel et Stekolnikov – 3450-3900 m  
*L. silvaticum* Hushcha et Schluger – 2782 m  
*Microtrombicula gratisa* Schluger et Kudryashova – 2950 m  
*M. similata* Schluger et Amanguliev – 3080 m  
*M. vacillata* Fernandes et Kulkarni – 3080 m  
*Montivagum dihumerale* (Traub et Nadchatram) – 3990 m  
*M. latum* (Schluger et Kudryashova) – 2950-3990 m  
*M. raropinne* (Schluger) – up to 3100 m  
*Neotrombicula kounickyi* Daniel et Stekolnikov – 3450-4000 m  
*N. lubrica* Kudryashova – 1090-3990 m  
*N. turkestanica* Kudryashova – 3990 m  
*Shunsennia oudemansi* (Schluger) – 1800-4100 m  
*Trombiculindus mehtai* Fernandes et Kulkarni – 3450-4600 m

**Myriapoda**  
**Chilopoda**  
**Scolopendromorpha**  
Fam. Scolopendridae  
*Scolopendra canidens* Newport – 2400 m  
**Diplopoda**  
**New ref.:** GOLOVATCH (2014, 2015b, 2016), GOLOVATCH, NZOKO FIEMAPONG & VANDEN SPIEGEL (2015), GOLOVATCH, VANDEN SPIEGEL & SEMENYUK (2016)

**Polydesmida** (restructuring)  
Fam. Trichopolydesmidae (syn. Fuhrmannodesmidae)  
Fam. Paradoxosomatidae  
*Anoplocephalus martensi* Golovatch – up to 3600 m (Nepal)  
*Beronodesmoides lobatus* Golovatch – 4600 m (Nepal)  
*B. montigena* Golovatch 3550 m (Nepal)  
*B. typicus* Golovatch – 3400 m (Nepal)  
*B. anteriporus* Golovatch – 3350 m (Nepal)  
*B. martensi* Golovatch – 2700 m (Nepal)  
*Beronodesmus latispinosus* Golovatch – up to 3500 m (Nepal)  
*B. longispinosus* Golovatch – up to 4270 m (Nepal)  
*B. pallidus* Golovatch – 4100 m (Nepal)  
*B. gorkhalis* Golovatch – up to 3600 m (Nepal)  
*B. latispinosus* Golovatch – 3150 m (Nepal)  
*B. serratus* Golovatch et al. – up to 3500 m (Nepal)  
*B. sinuatospinus* Golovatch – 2250 m (Nepal)  
*Delarthurum (= Armolites) chulingensis* (Golovatch) – up to 3700 m  
*D. similis* (Golovatch) – up to 2700 m  
*D. communicans* (Golovatch) – up to 2650 m  
*D. spiniger* (Attems) – 2200 m (India)  
*Hirtodrepanum latigonopum* Golovach – up to 2700 m  
*Kaschmiriosoma pleuroptera* Attems – up to 2800 m (Pakistan)  
*Martensosoma silvestre* Golovatch – up to 2600 m  
*M. schawalleri* Golovatch – up to 2150. m  
*M. splendens* Golovatch – up to 2150 m  
*Delarthurum (= Nepalomorpha) hirsutum* (Golovatch) – up to 4100 m  
*D. kuznetzovi* (Golovatch) – up to 3000 m  
*D. arunensis* (Golovatch) – up to 2150 m  
*Delarthurum (= Orophosoma) simulans* (Carl) – up to 3700 m  
*D. hingstoni* (Carl) – up to 3400 m  
*D. fechteri* (Golovatch) – up to 3150 m  
*Paranedyopus martensi* Golovatch – up to 3600 m

*P. similis* Golovatch – up to 3000 m  
*P. cylindricus* Carl – up to 2850 m  
*P. affinis* Golovatch – up to 2700 m  
*P. schawalleri* Golovatch – up to 2150 m  
*Delarthrum (= Parorthomorpha) tuberculatum*  
(Golovatch) – up to 3300 m  
*D. spectabilis* (Golovatch) – up to 2650 m  
*D. tergalis* Golovatch – up to 2650 m  
*D. nyakensis* Golovatch – up to 2450 m  
*D. philosophicum* Golovatch – up to 2450 m  
*Touranella himalayensis* Golovatch – up to 2700 m  
*Substrongylosoma montigena* Carl – up to 2300 m (India)

### Mountains of Southeast Asia China (south of Yang Tse), Thailand, Vietnam, Taiwan, Philippine Islands, Indonesia and Malaysia

#### Opiliones

**New ref.:** MARTENS (2016)  
Fam. Nemastomatidae  
*Sinostoma yunnanicum* Martens – 3800 m  
(China, Yunnan)

#### Araneae

**New ref.:** DANKITTIAPAKUL & JOCQUÉ (2006),  
ZONSTEIN & MARUSIK (2012)  
Fam. Zodariidae  
*Cydrela pristina* Dankittipakul et Jocqué – 1630 – 2500 m (Thailand, Doi Inthanon)  
Fam. Nemesiidae  
*Raveniola montana* Zonstein et Marusik – up 4300 m (China, Yunnan)  
*R. sangrila* Zonstein et Marusik – up 4300 m  
(China, Yunnan)  
*R. songi* Zonstein et Marusik – up 4300 m  
(China, Yunnan)

#### Myriapoda

**Diplopoda**  
**New ref.:** GOLOVATCH (2015, 2016), KORSÓS,  
ENGHOFF & CHANG (2008)

Diplopoda found at or above 2200 m after 2008:  
**Glomerida**

Fam. Glomeridae  
*Hyleoglomeris robusta* Attems – 1800-2400 m  
(Vietnam)  
*H. electa* Silvestri – 2300 – 2400 m (Vietnam)  
**Platydesmida**  
Fam. Platydesmidae  
*Platydesmus camptotrichus* Attems – 700-2400 m (Vietnam)  
*P. variegatus* Attems – 1500 – 2400 m (Vietnam)

#### Spirobolida

Fam. Pachybolidae

*Trigoniulus brachysternus* Attems – 1400 – 2400 m (Vietnam)

#### Siphonophorida

Fam. Siphonophoridae

*Teratognathus robusta* Attems – 1000 – 2400 m (Vietnam)

#### Polydesmida

Fam. Paradoxosomatidae

*Belousoviella kabaki* Golovatch – 3360 m (China, Sichuan)

*Cleptomorpha sumatrana* Golovatch – 1400 – 2600 m (Sumatra)

*Gonobelus pentaspinus* Golovatch – 2475 m (China, Sichuan)

*Hedinomorpha nigra* Golovatch – 4000 m (China, Sichuan)

*H. subnigra* Golovatch – 3910 m (China, Yunnan)

*H. montana* Golovatch – 3575 m (Yunnan)

*H. proxima* Golovatch – 3570 m (Yunnan)

*H. yunnanensis* Golovatch – 3480 m (Yunnan)

*H. reducta* Golovatch – 2900 m (Sichuan)

*H. jeekeli* Golovatch – 2600 m (China, Shaanxi)

*Inversispina erectispina* Golovatch – 4036 m (China, Sichuan), 3130 m (Yunnan, idem)

*Kronopolites biagrilectus* Hoffman – 3210 m (China, Yunnan)

*K. semirugosus* Golovatch – 2955 m (China, Sichuan)

*K. rugosus* Golovatch – 2400 m (China, Yunnan)

*Sellanucheza typica* Golovatch – 3155 m (Sichuan)

*Sigipinius grahami* Hoffman – 4205 m (China, Sichuan)

*S. simplex* Golovatch – 4195 m (China, Sichuan)

*S. complex* Golovatch – 4120 m (China, Sichuan)

*S. campanuliformis* Golovatch – 3910 m (China,

Yunnan)

*S. dentiger* Golovatch – 3570 m (China, Yunnan)

*S. kabaki* Golovatch – 3550 m (China, Xinjiang Uygur Prov.)

*Tectoporoides beroni* Golovatch – 1400-2600 m (Sumatra)

*T. aberrans* Golovatch – 1400-2600 m (Sumatra)

*T. beshkovi* Golovatch – 1400-2600 m (Sumatra)

*Tylopuso schawalleri* Golovatch 2700 m (China, Yunnan)

Fam. Cryptodesmidae

*Trichopeltis* Pocock – up to 2400 m (*T. kometis* Attems, Vietnam)

Fam. Polydesmidae

*Epanerchodus fuscus* Golovatch – 3325 m (China, Yunnan)

- Fam. Xystodesmidae  
*Riukiaria spatuliformes* Golovatch – 2525 m  
 (China, Sichuan)
- Fam. Cryptodesmidae  
*Trichopeltis kometis* (Attems) – 1500 – 2400 m  
 (Vietnam)
- Polyzoniida**
- Fam. Siphonocryptidae  
*Siphonocryptus compactus* Pocock – up to 2600 m, Sumatra (ENGOFF & GOLOVATCH, 1995)  
*Hirudicryptus taiwanensis* Korsós, Enghoff et Chang – up to 2200 m, Taiwan, Korsós, ENGOFF & CHANG, 2008)
- Mountains of New Guinea, Bismarck Archipelago and the Solomon Islands**
- Chilopoda**  
 New ref.: SHILEYKO & STOEV (2016)
- Scolopendromorpha**
- Fam. Cryptopidae  
*Cryptops doriae* Pocock – up to 3150 m (PNG)  
*C. nepalensis* Lewis, 1999-2700 m (PNG)  
*C. spinipes* Pocock – 2260-2600 m (PNG)  
*Cryptops* sp. – 3150 m (PNG)
- Diplopoda** (restructuring)  
 New ref.: GOLOVATCH & STOEV (2010, 2011, 2014, 2014a),
- Polydesmida**
- Fam. Paradoxosomatidae  
*Caloma agametum* Chamberlin – 2300 m (PNG)  
*Eustrongylosoma curtipes* Golovatch et Stoev – 2300 m (PNG)  
*E. beroni* Golovatch et Stoev – 2300 m (PNG)  
*E. finimtel* Golovatch et Stoev – [2300 m] (PNG)  
*E. tumbuna* Golovatch et Stoev – 2980 m (PNG)  
*E. masalai* Golovatch et Stoev – [2300 m] (PNG)  
*E. papua* Golovatch et Stoev – [2300 m] (PNG)  
*E. tifalmin* Golovatch et Stoev – [2300 m] (PNG)  
*Silvattia jeekeli* Golovatch et Stoev – 2300 m (PNG)  
*Tectoporos fugilil* Golovatch et Stoev – 2600 m (PNG)  
*T. bispinosus* Golovatch et Stoev – 2600 m (PNG)  
*T. moniliformis* Golovatch et Stoev – 2600 m (PNG)  
*T. spiniger* Golovatch et Stoev – 2300 m (PNG)  
*T. wilhelmicus* Golovatch et Stoev – 3610 m (PNG)
- Fam. Opisotretidae  
*Opisotretus beroni* Golovatch, Geoffroy, Stoev et Vanden Spiegel – Papua New Guinea
- Fam. Cryptodesmidae  
*Astrolabius hoffmani* Golovatch, Stoev et
- Vandenspiegel – 2600 m (Papua New Guinea)  
 Altai, the Mountains of Siberia, Mongolia and the Far East
- Araneae**  
 New ref.: TANASEVITCH (2013)
- Fam. Linyphiidae  
*Araeoncus crassiceps* (Westring) – 1800-2800 m (Altai)  
*A. yorkutensis* Tanasevitch – 500-2450 m (Altai)  
*Bathylynephia major* (Kul.) – 600-2500 m (Altai)  
*Bolyphantes distichus* (Tanasevitch) – up to 2300 m (Altai)  
*Dicymbium facetum* (L. Koch) – up to 3800 m (Altai)  
*Erigone arctica maritima* Kul. – 2500-3000 m  
*E. arcticola* Chamberlin et Ivie – 2400-3100 m (Altai)  
*E. cristatopalpus* Simon – up to 2400 m (Altai)  
*E. remota* L. Koch – up to 3100 m (Altai)  
*Gonatium pacificum* Eskov – 2400-3100 m (Altai)  
*Halorates altaicus* Tanasevitch – 2000-2500 m (Altai)  
*Hilaila glacialis* (Thorell) – 2400-3100 m (Altai)  
*H. meridionalis* Tanasevitch – 200-3300 m (Altai)  
*Improphanes improbulus* (Simon) – 1400-2500 m (Altai)  
*Incestophantes bonus* Tanasevitch – 2100-2800 m (Altai)  
*I. brevilamellus* Tanasevitch – 2600-2800 m (Altai)  
*I. tuvensis* Tanasevitch – 2600-3000 m (Altai)  
*Islandiana falsifica* (Keyserling) – 2400-3100 m (Altai)  
*Macrargus rufus* (Wider) – 2000-2500 m (Altai)  
*Mughiphantes sobrioides* Tanasevitch – 2600-2800 m (Altai)  
*Oedothorax mongolensis* (Heimer) – 2000-800 m (Altai)  
*Oreoneta eskovi* Saaristo et Marusik – 1700-2800 m (Altai)  
*Pelecopsis dorniana* Heimer – 1600-2200 m (Altai)  
*P. palmgreni* Marusik et Esyunin – 1400-2200 m (Altai)  
*Porrhomma pallidum* Jackson – 2100-2500 m (Altai)  
*Scotinotylusantennatus* (O.Pickard-Cambridge) – 2000-2300 m (Altai)

*S. protervus* (L. Koch) – 1800-3000 m (Altai)  
*Semljicola angulatus* (Holm) – 1650-2200 m (Altai)  
*S. latus* (Holm) – 1350-2200 m (Altai)  
*Silometopus uralensis* Tanasevitch – 1700 – 2200 m (Altai)  
*Stemonyphantes altaicus* Tanasevitch – 1300-2500 m (Altai)  
*Tenuiphantes suborientalis* Tanasevitch – 2200-2500 m (Tuva)  
*Thyreostenius parasiticus* (Westring) – 500-2200 m (Altai)  
*Typhlochrestoides baikalensis* Eskov – 1600-2200 m (Altai)  
*Walckenaeria capito* (Westring) – 1700-2500 m (Altai)  
*W. katanda* Marusik, Hippa et Koponen – 1500-2200 (Altai)  
*W. esyunini* Tanasevitch – 2600 m (Altai)

#### Mountains in West Equatorial Africa

##### Opiliones

New ref.: STAREGA & SNEGOVAYA (2008b)

Fam. Phalangiidae

*Camerobunus okucola* Starega et Snegovaya – 2200-2800 m (Cameroon)

##### Diplopoda

New ref.: GOLOVATCH, NZOKO FIEMAPONG & VANDEN SPIEGEL (2015)

Fam. Pyrgodesmidae

*Monachodesmus armorum* Golovatch et al. – 2320 m (Cameroon)

*Udodesmus camerunensis* Golovatch et al. – 2320 m (Cameroon)

*Urodesmus cornutus* Golovatch et al. – 2320 m (Cameroon)

#### ISOPODA in the Old World known at or above 2200 m and the highest living Isopoda in the World (supplementa)

New ref.: no new information

##### ARACHNIDA

#### SCORPIONES in the Old World known at or above 2200 m and the highest living Scorpiones in the World (supplementa)

New ref.: OCHOA et al. (2011), ZAMBRE, SANAP & MIRZA (2014)

Order Scorpiones. Maximal altitude (corrected): 4910 m in Peru, 4600 m in the Himalaya.

Fam. Euscorpiidae, Scorpiopinae

*Scorpiops* Peters – up to 4200 m (*S. spitiensis* Zambre, Sanap et Mirza, Himalaya)

OCHOA, OJANGUREN AFFILASTRO, MATTONI & PRENDINI (2011) described six new species of

genus *Orobothriurus* Maury, 1976 and made a list of the Scorpion species recorded above 3000 m in the Andes. This list contains 39 sp. of the genera *Orobothriurus*, *Bothriurus*, *Pachkutej*, and *Brachistosternus* (Bothriuridae, up to 4910 m in Peru), *Tityus* (Buthidae, up to 4200 m in Bolivia), *Hadrurooides* (Iuridae, up to 3379 m in Peru) and *Teuthraustes* (Chactidae, 3300 m in Ecuador). According to these authors, the former world maximum altitude, recorded for “*Orobothriurus*” *crassimanus* – actually *Pachkutej crassimanus* (Maury, 1976) by LOURENÇO (1997) – 5560 m at Nevado Huascaran (Peru) – is based on misidentification and erroneous locality data. These authors accept as highest record of scorpions the newly described *Orobothriurus huascaran* at 4910 m in Peru. In 1977 I have visited the area above Paron lake and climbed on the slopes of Huandoy over 5000 m. The environment was free of snow and ice, with forests of *Polylepis* and it is quite possible that scorpions will be found higher than 5000 m. In Asia scorpions have been found (with certainty) up to 4600 m (*Tibetiomachus himalayensis* Lourenço et Qi, 2006, Liochelidae), in Africa – up to 3500 m (*Uroplectes fischeri* Tullgren, 1910, Meru, Buthidae).

**PSEUDOSCORPIONES** found in the Old World at or above 2200 m and the highest found Pseudoscorpions in the World (supplementa)

No new information

#### OPILIONES in the Old World known at or above 2200 m and the highest living Opiliones in the World (supplementa)

New ref.: DAS & BASTAWADE (2006), MARTENS (2016), MARTENS & CHEMINI (1988), SNEGOVAYA (1999, 2004, 2010, 2014), STAREGA (1986), STAREGA & SNEGOVAYA (2008a, 2008b)

##### Eupnoi

Fam. Phalangiidae

*Camerobunus* Starega et Snegovaya – up to 2800 m (*C. okucola* Starega et Snegovaya, Cameroon)

*Homolophus* Banks (*Euphalangium* Roewer) – up to 4670 m (*H. andreevae* Starega et Snegovaya, Pamir), 3000 m (*H. gricenkoi* Starega et Snegovaya, Tadzhikistan), 3000 m (*H. [Euphalangium] martensi* (Das et Bastawade), Indian Himalaya)

*Odiellus* Roewer – up to 3000 m (*O. bieniaszi* Kulczynski, Caucasus)

*Opilio* Herbst – up to 3000 m (*O. lederi* Roewer), 2400 m (*O. redikorzevi* Roewer)(Caucasus)

*Pamiropilio* Starega et Snegovaya – up to 3300 m (*P. naukat* Starega et Snegovaya, Kyrgyzstan, Alayskiy Hrebet)

- Phalangium* L.- up to 3000 m (*Ph. punctipes* L.  
Koch, Caucasus)
- Dyspnoi**
- Fam. Nemastomatidae
- Mitostoma* Roewer - up to 3100 m (*Mitostoma*  
? - Pamir)
- Sinostoma* Martens - up to 3800 m (*S.  
yunnanicum* Martens, China, Yunnan)
- Fam. Trogulidae
- Anelasmococephalus* Simon - up to 2450 m (*A.  
osellai* Martens et Chemini, Appenines), 2200 m (*A.  
cambridgei* Westwood, Alps)
- Species of Opiliones, known from the Old World  
at and above 3500 m (restructuring of the list)**
- Homolophus* Banks (syn. *Euphalangium*)  
*nordenskioeldi* (L. Koch)(Phalangiidae) - 5600 m  
(Karakorum)
- Himalphalangium palpale* Roewer  
(Phalangiidae) - 5540 m (Nepal)
- Homolophus panpema* Suzuki (Phalangiidae) -  
5200 m (Nepal)
- H. luteum* Suzuki (Phalangiidae) - 5200 m  
(Nepal)
- Octozaleptus harai* Suzuki (Sclerosomatidae) -  
5200 m (Nepal)
- Leiobunum mirum* Roewer (Phalangiidae) -  
5200 m (Nepal)
- Sabaconidae gen. sp. - > 5000 m (Nepal)
- ?*Opilio* sp. (Phalangiidae) - 4800 m  
(Karakorum)
- Homolophus andreevae* Staręga et Snegovaya  
(Phalangiidae) - 4670 m (Pamir)
- Hypoxestus accentuatus* Sörensen (Assamiidae)  
- 4600 m (Kilimanjaro)
- Rhampsinitus bettoni* Pocock (Sclerosomatidae)  
- 4600 m (Kilimanjaro)
- ?*Phalangium* sp. (Phalangiidae) - 4500 m  
(Karakorum)
- Egaenus* (= *Diabunus*) *laevipes* (di Caporiacco)  
(Phalangiidae) - 4400 m (Karakorum)
- Sabacon dhaulagiri* Martens (Sabaconidae) -  
4250 m (Nepal)
- Biantes per nepalicus* Martens (Biantidae) - 4250  
m (Nepal)
- Himalphalangium dolpoense* Martens  
(Phalangiidae) - 4200 m (Nepal)
- Micrassamula thak* Martens (Assamiidae) -  
4200 m (Nepal)
- Hypoxestus holmi* Goodnight et Goodnight  
(Assamiidae) - 4200 m (East Africa)
- Gyoides himaldispersus* Martens  
(Sclerosomatidae) - 4200 m (Nepal)
- Odontobunus armatus* (Sörensen)(Phalangiidae)  
- 4200 m (Kenya), 4000 m (Kilimanjaro)
- Opilio almasyi* Roewer (Phalangiidae) - 4200 m  
(Karakorum)
- O. nigridorsum* di Caporiacco (Phalangiidae) -  
4200 m (Karakorum)
- Ereca undulata* Sörensen (Assamiidae) - 4025 m  
(Ruwenzori)
- E. simulator* Sörensen (Assamiidae) - 4000 m  
(Kilimanjaro)
- Metaereca abnormis* Roewer (Assamiidae) -  
4000 m (Ruwenzori)
- Hypoxestus patellaris* Sörensen (Assamiidae) -  
4000 m (Ruwenzori)
- Metabiantes punctatus* Sörensen (Biantidae) -  
4000 m (Kilimanjaro)
- Guruia africana* Karsch (Phalangiidae) - 4000  
m (Kilimanjaro)
- G. frigescens* Loman (Phalangiidae) - 4000 m  
(East Africa)
- Rhampsinitus ? mesomelas* Sörensen  
(Phalangiidae) - 4000 m (Kilimanjaro)
- Ereca maculata* Roewer (Assamiidae) - 3975 m  
(Kilimanjaro)
- Dhaulagirius altitudinalis* Martens  
(Phalangodidae) - 3950 m (Nepal)
- Cristina pachylomera* Simon (Phalangiidae) -  
3870 m (Ruwenzori; 3658 m, Semien)
- Rhampsinitus discolor* Karsch (Sclerosomatidae)  
- 3870 m (Ruwenzori)
- Himaldroma altus* Martens (Sclerosomatidae) -  
3830 m (Nepal)
- Rhampsinitus salti* Roewer (Phalangiidae) -  
3800 m (Kilimanjaro)
- Gyoides maximus* Martens (Sclerosomatidae) -  
3800 m (Nepal)
- Sinostoma yunnanicum* Martens (Nemasto-  
matidae) - 3800 m (Yunnan)
- Odontobunus africanus* Roewer (Phalangiidae)  
- 3770 m (Kivu)
- Gyoides gandaki* Martens (Sclerosomatidae) -  
3760 m (Nepal)
- Bunocheilis spinifera* Lucas (Phalangiidae) -  
3711 m (Tenerife)
- Eudasylobus infuscatus* Lucas (Phalangiidae) -  
3650 m (Atlas)
- Rilaena triangularis* Herbst (Phalangiidae) -  
3650 m (Atlas)
- Biantes thakkhali* Martens (Biantidae) - 3640 m  
(Nepal)
- Randilea scabricula* Roewer (Assamiidae) -  
3630 m (Elgon)
- Metabiantes trifasciatus* Roewer (Biantidae) -

- 3600 m (Meru)  
*Mitopus glacialis* Heer (Phalangiidae) – 3600 m  
 (Alps)  
*Dacnopilio scopulatus* Lawrence (Phalangiidae)  
 – 3600 m (Meru)  
*Egaenus tibetanus* Roewer (Phalangiidae) –  
 3600 m (Karakorum)  
*Harmania medioimmicans* Martens (Sclerosomatidae) – 3600 m (Nepal)  
*Simienatus scotti* Roewer (Assamiidae) – 3505 m (Semien, Ethiopia)  
*Metabiantes convexus* Roewer (Biantidae) –  
 3500 m (Ruwenzori)  
*Ereca lata* Sörensen (Assamiidae) – 3500 m  
 (Kilimanjaro)  
*E. affinis* Sörensen (Assamiidae) – 3500 m  
 (Kilimanjaro)  
*E. modesta* Sörensen (Assamiidae) – 3500 m  
 (Kilimanjaro)  
*Hypoxestus mesoleucus* Sörensen (Assamiidae)  
 – 3500 m (Kilimanjaro)  
*Harmania latephippiata* Martens (Sclerosomatidae) – 3500 m (Nepal)  
*H. nigrolineata* Martens (Sclerosomatidae) –  
 3500 m (Nepal)  
*Pokhara yodai* Suzuki (Sclerosomatidae) – 3500 m (Nepal)  
*Rhampsinitus soerrenseni* Starega (= *Rh. pictus* Sörensen) (Phalangiidae) – 3500 m (Meru)
- Maximal altitudes of Harvestmen (Opiliones), living above 2200 m in the Old World**
- 1 – Triaenonychidae – up to 2500 m
  - 2 – Oncopodidae – up to 2600 m
  - 3 – Podoctidae – up to 2410 m
  - 4 – Biantidae – up to 4250 m
  - 5 – Assamiidae – up to 4600 m
  - 6 – Phalangiidae – up to 5600 m
  - 7 – Sclerosomatidae – up to 5200 m
  - 8 – Ischyropsalididae – up to 2700 m
  - 9 – Sabaconidae – more than 5000 m
  - 10 – Nemastomatidae – up to 3800 m
- ARANEAE found in the Old World at or above 2200 m and the highest found Araneae in the World (supplementa)**
- New ref.:** DANKITTIAPAKUL & JOCQUÉ (2006), LOGUNOV & DEMIR (2006), JASTRZĘBSKI, 2010a, 2010b, 2011, OVTCHINNIKOV, AHMAD & INAYATULLAH (2008), SEYYAR, DEMIR, TOPÇU & TAŞDEMİR (2006), TANASEVITCH (2011b, 2013), ZONSTEIN & MARUSIK (2012)
- Fam. Amaurobiidae  
*Himalmartensis* Wang et Zhu – up to 3000 m (H. ausobskyi) Wang et Zhu, 2900 m (H. martensi) Wang et Zhu, 2600 m (H. nepalensis) Wang et Zhu), all from Nepal
- Fam. Linyphiidae  
*Acartauchenius* Simon – up to 2500 m (*A. himalayensis*) Tanasevitch, Karakorum)  
*Agyneta* Hull – up to 2635 m (*A. nigripes* Simon, Karakorum)  
*Anguliphantes* Saaristo et Tanasevitch – up to 2600 m (*A. nepalsioides*) Tanasevitch  
*Araeoncus* Simon – up to 2800 m (*A. crassiceps*) Westring, Altai), 2450 m (*A. yorkutensis*) Tanasevitch, Altai)  
*Archaraeoncus* Tanasevitch – up tp 3000 m (*A. prospiciens* Thorell, Karakorum)  
*Bathylinyphia* Eskov – up to 2500 m (*B. major* Kul., Altai)  
*Bolyphantes* C.L. Koch – up to 2300 m (*B. distichus*) Tanasevitch, Altai)  
*Caviphantes* Oi – up to 2500 m (*C. pseudosaxitorum*) Wunderlich, Karakorum)  
*Ceratinella* Emerton – up to 3100 m (*C. wideri*) Thorell, Karakorum)  
*Dicymbium* Menge – up to 3800 m (*D. facetum* L. Koch, Altai)  
*Erigone* Audooin – up to 3100 m (*E. arcticola*) Chamberlin et Ivie, Altai; *E. remota* L. Koch, Altai; 2650 m, Alps), 3000 m (*E. arctica maritima* Kul., Altai), 2400 m (*E. cristatopalpus* Simon, Altai)  
*Gonatium* Menge – up to 3100 m (*G. pacificum*) Eskov, Altai)  
*Gongylidiellum* Simon – up to 3200 m (*G. confusum*) Thaler, Kashmir), 2700 m, Karakorum)  
*Halorates* Hull – up to 2500 m (*H. altaicus*) Tanasevitch, Altai)  
*Hilaila* Simon – up to 3300 m (*H. meridionalis*) Tanasevitch, Altai), 3100 m (*H. glacialis* (Thorell, Altai))  
*Indophantes* Tanasevitch et Saaristo – up to 2700 m (*I. tonglu*) Tanasevitch (Himalaya)  
*Improphanes* Saaristo et Tanasevitch – up to 2500 m (*I. improbulus* Simon, Altai)  
*Incestophantes* Tanasevitch – up to 3000 m (*I. tuvensis*) Tanasevitch, Altai), 2800 m (*I. bonus*) Tanasevitch, *I. brevilamellus* Tanasevitch, Altai)  
*Islandiana* Braendegård – up to 3100 m (*I. falsifica*) Keyserling, Altai)  
*Macrargus* Dahl – up to 2500 m (*M. rufus*) Wider, Altai)  
*Maso* Simon – up to 2300 m (*M. sundevalli*) Westring, Karakorum)  
*Mughiphantes* Saaristo et Tanasevitch – up to 2800 m (*M. sobrioides*) Tanasevitch, Altai)

*Oedothorax* Bertkau – up to 2800 m (*Oe. mongolensis* Heimer, Altai)

*Oreoneta* Kulczynski – up to 2800 m (*O. eskovi* Saaristo et Marusik, Altai)

*Pelecopsis* Simon – up to 2300 m (*P. indus* Tanasevitch, Karakorum), 2200 m (*P. dorniana* Heimer, *P. palmgreni* Marusik et Esyunin, Altai)

*Piniphantes* Saaristo et Tanasevitch – up to 2800 m (*P. himalayensis* Tanasevitch, Karakorum)

*Porrhomma* Simon – up to 2500 m (*P. pallidum* Jackson, Altai), 2480 m (*P. pygmaeum* Blackwall, Karakorum)

*Prinerigone* Wunderlich – up to 2700 m (*P. vagans* Audouin, Karakorum)

*Scotargus* Simon – up to 2450 m (*S. pilosus* Simon, Karakorum)

*Scotinotylus* Simon – 3000 m (*S. protervus* L. Koch, Altai), 2300 m (*S. antennatus* O. Pickard-Cambridge, Altai)

*Semljicola* Strand – 2200 m (*S. angulatus* Holm, *S. latus* Holm Altai)

*Silometopus* Simon – up to 2200 m (*S. uralensis* Tanasevitch, Altai)

*Stemonyphantes* Menge – 2500 m (*S. altaicus* Tanasevitch, Altai)

*Tapinocybooides* Wiegle – up to 3100 m (*T. bengalensis* Tanasevitch)

*Tenuiphantes* Tanasevitch – up to 2500 m (*T. suborientalis* Tanasevitch, Tuva)

*Thyreostenius* Simon – up to 2200 m (*Th. parasiticus* Westring, Altai)

*Tiso* Simon – up to 2500 m (*T. incisus* Tanasevitch, Karakorum)

*T.(?) indianus* Tanasevitch – 2500 – 2600 m

*Typhlochrestoides* Eskov – up to 2200 m (*T. baikalensis* Eskov, Altai)

*Walckenaeria* Blackwall – up to 2600 m (*W. esyunini* Tanasevitch, Altai), 2500 m (*W. capito* Westring, Altai), 2200 m (*W. katanda* Marusik, Hippa et Koponen, Altai)

*Walckenaeria martensi* Wunderlich = *W. nepalensis* Wund. (syn. by Tanasevitch, 2011b)

Fam. Zodariidae

*Cydrela* Thorell – up to 2500 m (*C. pristina* Dankittipakul et Jocqué, Thailand, Doi Inthanon)

Fam. Nemesiidae

*Raveniola* Zonstein – up to 4300 m (*R. montana* Zonstein et Marusik, *R. sangrila* Zonstein et Marusik, *R. songi* Zonstein et Marusik, *R. yunnanensis* Zonstein et Marusik, China, Yunnan)

Fam. Gnaphosidae

*Gnaphosa* Latreille – up to 4100 m (*G. pakistanica* Ovtchinnikov, Ahmad et Inayatullah, Pakistan),

*Phaeocedus* Simon – up to 2300 m (*Ph. braccatus* L. Koch, Erciyes, Turkey)

Fam. Thomisidae

*Xysticus* Walckenaer – up to 3000 m (*X. bacurianensis* Mccheidze, Azerbaijan), 2900 m (Georgia), 2200 m (*X. cristatus* Clerck, Turkey)

### Species of Araneae, known from the Old World at and above 3500 m (supplement to the list)

*Raveniola montana* Zonstein et Marusik (Nemesiidae) – 4300 m (China, Yunnan)

*R. shangrila* Zonstein et Marusik (Nemesiidae) – 4300 m (China, Yunnan)

*R. songi* Zonstein et Marusik (Nemesiidae) – 4300 m (China, Yunnan)

*R. yunnanensis* Zonstein et Marusik (Nemesiidae) – 4300 m (China, Yunnan)

*Gnaphosa pakistanica* Ovtchinnikov, Ahmad et Inayatullah (Gnaphosidae) – 4100 m (Pakistan)

### ACARI found in the Old World at or above 2200 m and the highest found Acari in the World (supplementa)

New or ommited ref.: DANIEL (1973, 2015), DANIEL & STEKOLNIKOV (2009), DANIEL, STEKOLNIKOV, HAKIMITABAR & SABOORI (2010), ERMILOV & MARTENS (2014), FERNANDES & KULKARNI (2003)

#### Acariformes

##### Sarcophtiformes

**Acaridida** – correction: the highest Prostigmata found is on 3500 m (Himalaya)

**Oribatida** – correction: the highest Oribatida is found on 5800 m (Himalaya)

Fam. Scheloribatidae

*Perscheloribates* Hammer – up to 2800 m (*P. nepalensis* Ermilov et Martens, Nepal)

#### Trombidiformes

**Prostigmata** – correction: the highest Prostigmata is found on 5100 m (Himalaya)

Fam. Trombiculidae

*Aboriginesia* Kudryashova becomes synonyme of *Xinjiangsha* Wen et Shao

*Brunehaldia* Vercammen-Grandjean et Kolebinova – up to 2950 m (*B. lucida* Schluger, Hindu Kush)

*Cheladonta* Lipovsky, Crossley et Loomis – up to 4000 m (*Ch. ikaensis* Sasa et al., Nepal)

*Doloisia* Oudemans – up to 3450 m (*D. vlastae* Daniel et Stekolnikov, Nepal)

*Euschoengastia* Ewing – up to 3990 m (*E. meshhedensis* Kudryashova et al., Hindu Kush)

*Leptotrombidium* Nagayo et al. – up to 3900 m (*L. angkamii* Daniel et Stekolnikov, Nepal), 2782 m

(*L. silvaticum* Hushcha et Schluger, Hindu Kush)

*Microtrombicula* Ewing – up to 3080 m (*M. similata* Schluger et Amanguliev, *M. vacillata* Fernandes et Kulkarni), 2950 m (*M. gratiosa* Schluger et Kudryashova, all from Hindu Kush)

*Montivagum* Kudryashova – up to 3990 m (*M. dihumerale* Traub et Nadchatram, *M. latum* (Schluger et Kudryashova) (Hindu Kush), 3100 m (*M. raropinne* (Schluger, Hindu Kush)

*Neotrombicula* Hirst – up to 4000 m (*N. kounickyi* Daniel et Stekolnikov, Nepal), 3990 m (*N. lubrica* Kudryashova, Hindu Kush, *N. turkestanica* Kudryashova)

*Shunsennia* Jameson et Toshioka – up to 4550 m (*Shunsennia oudemansi* Schluger, Hindu Kush; 4100 m, )

*Trombiculindus* Radford – up to 4600 m (*T. mehtai* Fernandes et Kulkarni, Nepal)

#### Species of Prostigmata (Trombidiformes), known from the Old World at and above 3500 m (supplement to the list)

*Trombiculindus mehtai* Fernandes et Kulkarni (Trombiculidae) – 4600 m (Nepal)

*Shunsenia oudemansi* Schluger (Trombiculidae) – 4100 m (Hindu Kush)

*Neotrombicula kounickyi* Daniel et Stekolnikov (Trombiculidae) – 4000 m (Himalaya)

*Ch. ikaoensis* Sasa et al. (Trombiculidae) – 4000 m (Nepal)

*Euschoengastia meshhedensis* Kudryashova et al. (Trombiculidae) – 3990 m (Hindu Kush)

*Montivagum dihumerale* Traub et Nadchatram (Trombiculidae) – 3990 m (Hindu Kush)

*M. latum* (Schluger et Kudryashova) (Trombiculidae) – 3990 m (Hindu Kush)

*Leptotrombidium angkamii* Daniel et Stekolnikov (Trombiculidae) – 3900 m (Nepal)

#### DIPLOPODA found in the Old World at or above 2200 m and the highest found Diplopoda in the World (supplement)

New Ref.: ENGHOFF & GOLOVATCH (1995), GOLOVATCH (2013, 2014, 2015a, 2015b, 2016), GOLOVATCH, EVSYUKOV & REIP (2016), GOLOVATCH & STOEV (2009, 2010, 2011, 2014a, 2014b), GOLOVATCH, VANDENSPIEGEL & SEMENYUK (2016), GOLOVATCH, NZOKO FIEMAPONG & VANDENSPIEGEL (2010, 2015), KORSÓS, ENGHOFF & CHANG (2008), NEFEDIEV, NEFEDIEVA & JANKOWSKI (2015)

#### Glomerida

Fam. Glomeridae

*Hyleogloemeris* Verhoeff – up to 2400 m (*H. robusta* Attems, *H. electa* Silvestri, Vietnam)

#### Chordeumatida

Fam. **Opisthocheiridae**

*Ceratosphys cryodeserti* Gilgado, Mauriès et Enghoff – (Sierra Nevada)

#### Platydesmida

Fam. **Platydesmidae**

*Platydesmus* Cook – up to 2400 m (*P. campyotrichus* Attems, *P. variegatus* Attems, Vietnam)

#### Polydesmida

Fam. Fuhrmannodesmidae becomes synonyme of Trichopolydesmidae (after GOLOVATCH, 2013)

Fam. Paradoxosomatidae – up to 4600 m (Nepal)

*Anoplocephalus* Schaeffer – up to 3600 m (*A. martensi* Golovatch, Nepal)

*Belousoviella* Golovatch – up to 3360 m (*B. kabaki* Golovatch, Sichuan)

*Beronodesmoides* Golovatch – up to 4600 m (*B. lobatus* Golovatch, Nepal), 3550 m (*B. montigena* Golovatch, Nepal), 3400 m (*B. typicus* Golovatch, Nepal), 3350 m (*B. anteriporus* Golovatch, Nepal), 2700 m (*B. martensi* Golovatch, Nepal)

*Beronodesmus* Golovatch – up to 4270 m (*B. longispinosus* Golovatch, Nepal), 4100 m (*B. pallidus* Golovatch, Nepal), 3600 m (*B. gorkhalis* Golovatch, Nepal), 3500 m (*B. serratus* Golovatch et al., *B. latispinosus* Golovatch et al., Nepal), 2650 m (*B. martensi* Golovatch et al., Nepal), 2250 m (*B. sinuatospinus* Golovatch, Nepal)

*Caloma* Chamberlin – up to 2300 m (*C. agametum* Chamberlin, Papua New Guinea)

*Cleptomorpha* Golovatch – up to 2600 m (*C. suamatrana* Golovatch, Sumatra)

*Delartrum* Attems (syn. *Nepalomorpha* Golovatch, *Parorthomorpha* Golovatch, *Martensosoma* Golovatch, *Armolites* Golovatch, *Orophosoma* Jeekel) – up to 3250 m (*D. tenuitergale* Golovatch, Nepal), 3100 m (*D. typicum* Golovatch, Nepal); according to GOLOVATCH (2014), in the list in BERON (2008) should be changed the following species:

*Delartrum [Martensosoma] silvestre* (Golovatch), *Delartrum [Martensosoma] schwalleri* (Golovatch), *Delartrum [Martensosoma] splendens* (Golovatch), *Delartrum [Nepalomorpha] hirsutum* (Golovatch), *Delartrum [Nepalomorpha] kuznetzovi* (Golovatch), *Delartrum [Nepalomorpha] arunense* (Golovatch), *Delartrum [Parorthomorpha] tuberculatum* (Golovatch), *Delartrum [Parorthomorpha] spectabile* (Golovatch, 2650 m, Nepal, GOLOVATCH, 2016), *Delartrum [Parorthomorpha] tergale* (Golovatch), *Delartrum [Parorthomorpha] nyakense* (Golovatch), *Delartrum [Parorthomorpha] philosophica* (Golovatch), *Delartrum*

[*Armolites*] *chulingensis* (Golovatch), *Delartrum* [*Armolites*] *simile* (Golovatch), *Delartrum* [*Armolites*] *communicans* (Golovatch), *Delartrum* [*Armolites*] *spiniger* (Attems, India), *Delartrum* [*Orophosoma*] *simulans* (Carl), *Delartrum* [*Orophosoma*] *hingstoni* (Carl), *Delartrum* [*Orophosoma*] *fechteri* (Golovatch) (all others from Nepal)

*Eustrongylosoma* Silvestri – up to 2980 m (*E. tumbuna* Golovatch et Stoev), 2300 m (*P. beroni* Golovatch et Stoev, *E. curtipes* Golovatch et Stoev, Golovatch et Stoev, *E. masalai* Golovatch et Stoev, *E. finimtel* Golovatch et Stoev, *E. maculatum* Golovatch et Stoev, *E. papua* Golovatch et Stoev, *E. tifalmin* Golovatch et Stoev), all from Papua New Guinea

*Gonobelus* Attems – up to 2475 m (*G. pentaspinus* Golovatch, China, Sichuan)

*Hedinomorpha* Verhoeff – up to 4000 m (*H. nigra* Golovatch, China, Sichuan), 3910 m (*H. subnigra* Golovatch, China, Yunnan), 3575 m (*H. montana* Golovatch, Yunnan), 3570 m (*H. proxima* Golovatch, Yunnan), 3480 m (*H. yunnanensis* Golovatch, Yunnan), 2900 m (*H. reducta* Golovatch, Sichuan), 2600 m (*H. jeekeli* Golovatch, China, Shaanxi)

*Hirtoderpanum* Golovatch – up to 2600 m (*H. latigonopum* Golovatch, Nepal)

*Inversispina* Zhang – up to 4036 m (*I. erectispina* Golovatch, China, Sichuan), 3130 m (Yunnan, idem)

*Kronopolites* Attems – up to 3210 m (*K. biagriblectus* Hoffman, China, Yunnan), 2955 m (*K. semirugosus* Golovatch, China, Sichuan), 2400 m (*K. rugosus* Golovatch, China, Yunnan)

*Sellanucheza* Enghoff, Golovatch et Nguyen Duc – up to 3155 m (*S. typica* Golovatch, Sichuan)

*Sigipinius* Hoffman – up to 4205 m (*S. grahami* Hoffman, China, Sichuan), 4195 m (*S. simplex* Golovatch, China, Sichuan), 4120 m (*S. complex* Golovatch, China, Sichuan), 3910 m (*S. campanuliformis* Golovatch, China, Yunnan), 3570 m (*S. dentiger* Golovatch, China, Yunnan), 3550 m (*S. kabaki* Golovatch, China, Xinjiang Uygur Prov.)

*Tectoporoides* Carl – up to 3610 m (*T. wilhelmicus* Golovatch et Stoev, Papua New Guinea), 2980 m (*T. fugilil* Golovatch et Stoev, Papua New Guinea), 2600 m (*T. aberrans* Golovatch, *T. beroni* Golovatch, *T. beshkovi*, Sumatra; *T. fugilil* Golovatch et Stoev, *T. bispinosus* Golovatch et Stoev, *T. moniliformis* Papua New Guinea), 2300 m (*T. spiniger* Golovatch et Stoev, Papua New Guinea)

*Tylopus* Jeekel – up to 2700 m (*T. schawalleri* Golovatch, China, Yunnan)

Fam. Cryptodesmidae

*Astrolabius* Verhoeff – up to 2600 m (*A. hoffmani* Golovatch, Stoev et Vandenspiegel, Papua New Guinea)

*Trichopeltis* Pocock – up to 2400 m (*T. kometis* Attems, Vietnam)

Fam. Pyrgodesmidae

*Monachodesmus* Silvestri – up to 2320 m (*M. armorum* Golovatch et al., Cameroon)

*Udodesmus* Cook – up to 2320 m (*U. camerunensis* Golovatch et al., Cameroon)

*Urodesmus* Porat – up to 2320 m (*U. cornutus* Golovatch et al., Cameroon)

Fam. Polydesmidae

*Brachydesmus* Heller – up to 2800 m (*B. assimilis* Lohmander, 1936, Caucasus), 2400 m (*B. kalishevskyi* Lignau, Caucasus)

*Epanerchodus* Attems – up to 3325 m (*E. fuscus* Golovatch, China, Yunnan)

*Polydesmus* Latreille – up to 2800 m (*P. lignaui* Lohmander, Caucasus)

Fam. Xystodesmidae

*Riukiaria* Attems – up to 2525 m (*R. spatuliformes* Golovatch, China, Sichuan)

Fam. Opisotretidae

*Opisotretus beroni* Golovatch, Geoffroy, Stoev et Vandenspiegel (Papua New Guinea)

Order **Polyzoniida**

Fam. Siphonocryptidae

*Siphonocryptus* Pocock – up to 2600 m (*S. compactus* Pocock (Sumatra, ENGHOFF & GOLOVATCH, 1995)

*Hirudicryptus* Enghoff et Golovatch – up to 2200 m (*H. taiwanensis* Korsós, Enghoff et Chang (Taiwan, Korsós, ENGHOFF & CHANG, 2008)

**Species of DIPLOPODA, known from the Old World at and above 3500 m (restructuring of the list in BERON, 2008)**

*Nepalmatoiulus ivanloeblji* Enghoff (Julida, Julidae) – 4800 m (Nepal)

*Beronodesmoides lobatus* Golovatch (Polydesmida, Paradoxosomatidae) – 4600 m (Nepal)

*Uixenus* sp. (Polyxenida, Polyxenidae) – 4550 m (Nepal)

*Hingstonia variata* Golovatch (Polydesmida, Trichopolydesmidae = Fuhrmannodesmidae) – 4500 m (Nepal)

*Anaulaciulus niger* Korsós (Julida, Julidae) – 4500 m (Nepal)

*A. bilineatus* Korsós (Julida, Julidae) – 4300 m (Nepal)

*Beronodesmus longispinosus* Golovatch (Polydesmida, Paradoxosomatidae) – 4270 m (Nepal)

*Usbekodesmus* sp. (Polydesmida, Polydesmidae) – 4250 m (Nepal)

*Sigipinius grahami* Hoffman (Polydesmida, Paradoxosomatidae) – up to 4205 m (China, Sichuan)

*Sigipinius simplex* Golovatch (Polydesmida, Paradoxosomatidae) – 4195 m (China, Sichuan)

*Sphaeroparia petarberoni* Mauriès et Heymer (Polydesmida, Trichopolydesmidae = Fuhrmannodesmidae) – 4200 m (Ruwenzori)

*Sigipinius complex* Golovatch (Polydesmida, Paradoxosomatidae) – 4120 m (China, Sichuan)

*Beronodesmus pallidus* Golovatch (Polydesmida, Paradoxosomatidae) – 4100 m (Nepal)

*Delarthrum* (= *Nepalomorpha*) *hirsutum* (Golovatch) (Polydesmida, Paradoxosomatidae) – 4100 m (Nepal)

*Kashmireuman nepalensis* Mauriès (Chordeumatida, Kashmireumatidae) – 4100 m (Nepal)

*Nepalella* sp. (Chordeumatida, Megalotylidae) – 4100 m (Nepal)

*Inversispina erectispina* Golovatch (Polydesmida, Paradoxosomatidae) – 4036 m (China, Sichuan)

*Hedinomorpha nigra* Golovatch (Polydesmida, Paradoxosomatidae) – 4000 m (China, Sechuan)

*Usbekodesmus sacer* Golovatch (Polydesmida, Polydesmidae) – 4000 m (Nepal)

*Hingstonia gogonema* Golovatch (Polydesmida, Trichopolydesmidae = Fuhrmannodesmidae) – 4000 m (Buthan)

*Anaulaciulus acaudatus* Korsós (Julida, Julidae) – 3990 m (Sikkim)

*Sigipinius campanuliformis* Golovatch (Polydesmida, Paradoxosomatidae) – 3910 m (China, Yunnan)

*Hedinomorpha subnigra* Golovatch (Polydesmida, Paradoxosomatidae) – 3910 m (China, Yunnan)

*Tianella daamsae* Shear (Chordeumatida, Cleidogonidae) – 3900 m (Nepal)

*Nepalella gunsa* Shear (Chordeumatida, Megalotylidae) – 3800 m (Nepal)

*Nepalmatoiulus hyalilobus* Enghoff (Julida, Julidae) – 3800 m (Nepal)

*Delarthrum* (= *Armolites*) *chulingensis* (Golovatch) (Polydesmida, Paradoxosomatidae) – 3700 m (Nepal)

*Sigipinius dentiger* Golovatch (Polydesmida, Paradoxosomatidae) – 3570 m (China, Yunnan)

*Anaulaciulus tibetanus* Korsós (Julida, Julidae) – 3700 m (Tibet)

*Hingstonia fittkaui* Golovatch (Polydesmida, Trichopolydesmidae = Fuhrmannodesmidae) – 3650 m (Nepal)

*H. sympatrica* Golovatch (Polydesmida, Trichopolydesmidae = Fuhrmannodesmidae) – 3650 m (Nepal)

*H. serrata* Golovatch (Polydesmida, Trichopolydesmidae = Fuhrmannodesmidae) – 3600 m (Nepal)

*Tectoporoides wilhelmicus* Golovatch et Stoev (Polydesmida, Paradoxosomatidae) – 3610 m (Papua New Guinea)

*Beronodesmus gorkhalis* Golovatch (Polydesmida, Paradoxosomatidae) – 3600 m (Nepal)

*Anoplocephalus martensi* Golovatch (Polydesmida, Paradoxosomatidae) – 3600 m (Nepal)

*Dolichoilius canariensis* Bröleemann (Julida, Julidae) – 3600 m (Nepal)

*Nepalmatoiulus mauriesi* Enghoff (Julida, Julidae) – 3600 m (Nepal)

*Polydesmus* (Polydesmida, Polydesmidae) – 3600 m (Tenerife)

*Hedinomorpha montana* Golovatch (Polydesmida, Paradoxosomatidae) – 3575 m (China, Yunnan)

*Hedinomorpha proxima* Golovatch (Polydesmida, Paradoxosomatidae) – 3570 m (China, Yunnan)

*Sigipinius kabaki* Golovatch (Polydesmida, Paradoxosomatidae) – 3550 m (China, Xinjiang Uygur Prov.)

*Beronodesmoides montigena* Golovatch (Polydesmida, Paradoxosomatidae) – 3550 m (Nepal)

*Beronodesmus serratus* Golovatch, VandenSpiegel et Semenyuk (Polydesmida, Paradoxosomatidae) – 3500 m (Nepal)

*Beronodesmus latispinosus* Golovatch (Polydesmida, Paradoxosomatidae) – 3500 m (Nepal)

*Nepalella deharvengi* Mauriès (Chordeumatida, Megalotylidae) – 3500 m (Nepal)

*Stemmiulus sjostedti* Attems (Stemmiulida, Stemmiulidae) – 3500 m (Meru)

*Hingstonia beatae* Golovatch (Polydesmida, Trichopolydesmidae = Fuhrmannodesmidae) – 3500 m (Nepal)

*Sphaeroparia minuta* Attems (Polydesmida, Trichopolydesmidae = Fuhrmannodesmidae) – 3500 m (Meru)

*Hedinomorphayunnanensis* Golovatch (Polydesmida, Paradoxosomatidae) – 3480 m (China, Yunnan)

*Ceratosphys simoni* Ribaut (Craspedosomatida, Opisthocheiridae) – 3460 m (Sierra Nevada)

*Janetschekella valesiaca* (Faës) (= *nivalis*) Schubart (Craspedosomatida, Craspedosomatidae) – 3450 m (Alps)

**Re-calculated figures for the number of some Isopoda, Arachnida and Myriapoda recorded in the Old World at or higher than 2200 m**

Scorpiones – from 28 to 29 sp.

Opiliones – from 294 to 305 sp.

Araneae – from 1340 to 1381 sp.

Acari Trombidiformes – added 12 sp. of Trombiculidae  
 Chilopoda – from 159 to 160 sp.  
 Diplopoda – from 294 to 365 sp.; added are also the order Polyzoniida, the families Platysmidae, Xystodesmidae, Opisotretidae and Siphonocryptidae

and 24 genera. Many corrections are made also in the lists of high altitude taxa in different areas.

Total inhabitants of altitudes over 2200 m in the Old World: 3927 (formerly 3789) sp.

The tendency, called by us “taxogradient”, remains valid.

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## Високопланински Isopoda, Arachnida и Myriapoda в Стария свят (допълнения и поправки 2008-2016)

Петър БЕРОН

(Резюме)

След излизането на моята монография (BERON, 2008) бяха публикувани много нови данни и извършени някои корекции на по-старата информация върху високопланинските Isopoda, Arachnida и Myriapoda в Стария свят. Това наложи настоящото първо допълнение. С така ревизираните данни броят на известните видове от някои групи във високите планини се изменя както следва:

Scorpiones – от 28 на 29 в.

Opiliones – от 293 на 306 в.

Araneae – от 1340 на 1381 в.

Acari Trombidiformes – добавят се 12 в. от сем. Trombiculidae

Diplopoda – от 294 на 365 в.

Общ брой на изоподите, паякоподобните и многоножките в стария свят, познати над 2200 м: 3927 вида (според BERON, 2008-3789)