**The Systematics of Porcellio hoffmannseggii from Seville: Porcellio sp. "Sevilla"**

**Introduction:**

In recent months, there has been a substantial amount of discussion and debate regarding the identity of *Porcellio hoffmannseggii* localities and morphs within commerce. This post serves as an effort to clarify the morphological variations *P. hoffmannseggii* exhibit, provide a brief overview of the species systematic history, and ultimately establish a definitive identification for *Porcellio* sp. "Sevilla."

**Brief Systematic Overview:**

In 1833, Brandt first described *P. hoffmannseggii***[1]** using specimens from Lusitania, an ancient Roman province covering modern-day Portugal and parts of western Spain (Brandt, 1833). In the same publication, Brandt also provided a description of *P. emarginatus***[2]**, using specimens from the same localities. Milne-Edwards reaffirmed Brandt's findings in 1840 (Milne-Edwards, 1840).  However, in 1885, Budde-Lund synonymized  *P. emarginatus* with *P. hoffmannseggii*, recognizing that Brandt's descriptions referred to a male and female. Budde-Lund offered a more comprehensive description of *P. hoffmannseggii* based on numerous new specimens from Southern Spain and one locality in Morocco (Budde-Lund, 1885). In 1887, Buen recorded *P. emarginatus* from various localities, including Algeciras, Almadenejos, Lora del Rio, and Seville (Buen, 1887).  In 1892, Dollfus recorded *P. hoffmannseggii* from Algeciras, Ciudad Real, Cordoba, Huelva, and Seville (Dollfus, 1892).  In 1896 he further lists records from Morocco, Le Fondak between Tangier and Tetuan and from Western Algeria without specific location details (Dollfus, 1896). However, Schmalfuss mentioned in his revision that the Algerian finding is doubtful (Schmalfuss, 1987). In 1908, Budde-Lund designated *P. hoffmannseggii* as the type species for the subgenus *Rogopus* (Budde-Lund, 1908). In 1936, Arcangeli discussed the systematics of *P. hoffmannseggi* and reported records from Algeciras, Benajoan, Cordoba, and Seville in Southern Spain; Beja and Serpa in Portugal; and "Xauen" in Morocco. Furthermore, he synonymized *P. buddelundi* Simon, 1885, *P. magnificus* Dollfus, 1892, and *P. batesoni* Collinge, 1915, with *P. hoffmannseggi*, all incorrectly without examining specimens (Arcangeli, 1936; Schmalfuss; 2003). In 1937, Verhoeff described *P. hoffmannseggii* subsp. *tamaricis* from Gharb, Morocco, Schmalfuss later synonymized this subspecies due to its morphological features within the range of variation exhibited by *P. hoffmannseggii* (Schmalfuss, 1987). However, some authors may still consider it valid (Boyko et al., 2023). In 1938, Verhoeff created two keys for *P. hoffmannseggii*, one including *P. hoffmannseggii* subsp. *tamaricis* from the localities of Larache, Rabat, and Tiznit, Morocco, and another with a new subspecies, *P. hoffmannseggii* subsp. *nemethi* from High Atlas, Morocco. Subsequently, *P. hoffmannseggii* subsp. *nemethi* was recognized as distinct and raised to a specific level (Schmalfuss, 1987).  In 1946, Vandel agreed with Arcangeli's decision to synonymize *P. magnificus* and *P. batesoni* with *P. hoffmannseggii*, also without examining specimens (Vandel, 1946). In 1951, Vandel suggested that *P. sordidus* Budde-Lund, 1885, from Valencia and the Balearic Islands should be considered a subspecies of *P. hoffmannseggii*, along with *P. magnificus* and *P. buddelundi*. Schmalfuss later agreed with the classification of *P. hoffmannseggii* subsp. *sordidus***[3]**based on the subspecies distinctive coloration, the noticeable angling of the Exopodite 1, and the ridge on Carpus VII being at its highest point in the basal third (Schmalfuss, 1987). According to Vandel’s illustration this feature appears to be more pronounced in larger males compared to the nominate form. In 1955, Schmölzer described *P. hispanicus* based on specimens from several southern Spanish localities, including Alcala de Guadaira, Algeciras, Carmona, Seville, and Sierra Ronda. He identified the distinguishing features as a notch in the median head lobe and a ridge on the carpus of the 7th pereopod (Schmölzer, 1955a). However, in another publication the same year, Schmölzer reported records of *P. hispanicus* from Sierra del Pinar and Ronda exhibiting considerable variation in the notch of the median head lobe, leading Schmalfuss to synonymize the species (Schmölzer, 1955b; Schmalfuss, 1987).

This taxonomic confusion primarily stemmed from Brandt's inadequate descriptions, and due to subsequent authors not examining his type specimens. In 1987, Schmalfuss conducted a comprehensive examination of Brandt's material and material from numerous other locations. This effort resulted in the first and only thorough re-description of *P. hoffmannseggii***[4]**, helping to clarify the taxonomic confusion surrounding it. However, this re-description still leaves some gaps in our complete understanding of the morphological variation within *P. hoffmannseggii*.

***Porcellio* sp. "Sevilla" as *Porcellio hoffmannseggii***

Three years ago, I proposed that Porcellio sp. "Sevilla" was not distinct from P. hoffmannseggii after examining photo records on iNaturalist. However, my viewpoint couldn't be confirmed until recently when Laura Mae Riepl of Smug Bug kindly provided me with multiple specimens for dissection and examination. Indeed, there were several characteristics that were not described in Schmalfuss' re-description, although they were subtle. These variations included a rounded median head lobe (as opposed to notched), nearly smooth integument granulation (in contrast to rough or pronounced granules), slightly longer antennae, a slightly larger ridge on Carpus VII, noticeable angling of Exopodite 1, and numerous unrecorded setae on the pleopods and pereopods. Nevertheless, I suspected that these characteristics fell within the range of variation observed in *P. hoffmannseggii*. However, I lacked confirmed specimens of P. hoffmannseggii for a direct comparison. As a result, I reached out to Dr. Julio Cifuentes, an isopodologist with expertise in Spanish *Porcellio*. He graciously provided me with a detailed reply**[5]**, which further supported my notion that these species are indeed *P. hoffmannseggii*.

“Regarding your question, first of all, let me tell you that the name "Sevilla" for this *Porcellio* comes from its breeder and seller, from whom it obtains different color variants. In nature this species presents a wide variability. The coloration ranges from black to dark brown, with or without yellowish spots, with white pleuroepimers, but with a greater or lesser extension of the pigment, which is why in some specimens they are black or brown. In the Cephalon the lateral lobes are more or less large and the median lobe can be rounded or notched. The granulations of the integument are more or less marked in different individuals, some are almost smooth. Also in the male, allometry makes the antennae somewhat longer; pereiopod 7 has a more or less large crest; the exopodites of the uropods are much larger than in the female and the exopodites of pleopod 1 are more or less long and more or less diagonally truncate at the end. Given this variability of numerous characters, the constancy of the morphology of the setae-scales stands out, which is why they are very useful for determining the species of this genus. I have had the opportunity to study some specimens from this breeder, as well as numerous specimens from nature and the one in the photo is undoubtedly Porcellio hoffmannseggii. I hope these notes help you.”

Therefore, we can now assert with a high degree of confidence that *Porcellio* sp. "Sevilla" is indeed *Porcellio hoffmannseggii*. While some have suggested that "Sevilla'' might be a subspecies, this hypothesis appears unlikely, as there is no geographic basis to support such a distinction. Furthermore, the observed variations within "Sevilla" are consistent across all populations of *P. hoffmannseggii*.

**List of species in commerce almost certainly P. hoffmannseggii, with accompanying notes:**

*Porcellio hoffmannseggi* "black" — No notable distinctions, except for allometric growth (specimen examination pending).

*Porcellio hoffmannseggi* "chocolate" — No notable distinctions (specimen examination pending).

*Porcellio hoffmannseggi* "classic/wildtype" — No notable distinctions, typically recognized as true *P. hoffmannseggi* (specimen examination pending).

Porcellio hoffmannseggi *'Morocco' —* Displays morphological variations similar to those observed in "Sevilla"; potential subspecies (specimen examination pending).

*Porcellio* sp. "Sevilla" — Morphological variations within that of *P. hoffmannseggii* (specimens examined).

*Porcellio* sp. "white antennae / Almeria mountains" — Dr. Julio Cifuentes confirmed as *P. hoffmannseggii;* potential subspecies due to morphological variations (specimen examination pending).

**References**

Arcangeli, A. (1936). Gli Isopodi terrestri del Portogallo. Boll. Lab. Zool. gen. agr. R. Scuola Agric. Portici, 29, 1-39

Boyko, C.B.; Bruce, N.L.; Hadfield, K.A.; Merrin, K.L.; Ota, Y.; Poore, G.C.B.; Taiti, S. (Eds) (2023). World Marine, Freshwater and Terrestrial Isopod Crustaceans database. Porcellio hoffmannseggii tamaricis. Accessed through: World Register of Marine Species at: https://www.marinespecies.org/aphia.php?p=taxdetails&id=264605 on 2023-09-02.

Brandt, J. F. (1833). Conspectus monographiae crustaceorum oniscodorum Latreillii. Bulletin de la Société Impériale des Naturalistes de Moscou, 6, 171-193, pl. 4.

Budde-Lund, G. (1908). Isopoda von Madagaskar und Ostrafrika mit Diagnosen verwandter Arten. In: Voeltzkow, A., Reise in Ostafrika in den Jahren 1903-1905. Wiss. Ergebn. 2, 265-308, Fafeln 12-18; Stuttgart.

Buen, O. de (1987). Materiales para la fauna carcinológica de España. An. Soc. esp. Hist. nat., 16, 405-434.

Dollfus, A. (1896). Les isopodes terrestres du nord de l'Afrique, du Cap Blanc a Tripoli (Maroc, Algerie, Tunisie, Tripolitaine). Mem. Soc. zool. France, 9, 523-553

Dollfus, A. (1992). Catalogue raisonné des Isopodes terrestres de l'Espagne. An. Soc. esp. Hist. nat., 21, 161-190.

Milne-Edwards, M. (1840). Histoire naturelle des Crustacés. III. Isopoda, pp. 115-283, Tafelfn 31-33.

Budde-Lund, G. (1885). Crustacea isopoda terrestria per familias et genera et species, 319 pp.

Schmalfuss, H. (1987). Revision der Gattung Porcellio (Isopoda, Oniscidea). 1. Beitrag: P. hoffmannseggi und P. magnificus. EOS Revista Espanola de Entomologia, 63(1-4), 281-300.

Schmalfuss, H. (2003). World catalog of terrestrial isopods (Isopoda: Oniscidea). Stuttgarter Beiträge zur Naturkunde. Serie A, 654, 1-341.

Schmölzer, K. (1955a). Landasseln aus Spanien, gesammelt von Prof. Dr. Herbert Franz. Ein Beitrag zur Kenntnis der spanischen Isopodenfauna. Eos, 31, 311-321.

Schmölzer, K. (1955b). Isopoda terrarum mediterraneum. 1. Mitteilung: Über neue und bekannte Landasseln der Pyrenaeenhalbinsel. Eos, 31, 155-215.

**Additional Material**

[1] **Description:** “Processus frontalis evolutus... Processus frontalis medius

emarginatus... Dorsum griseo-brunneum. Appenclicum caudalium lateralium ultimus articulus articulo basali caudae appendicis plus duplo longior. Patria. Lusitania, Caucasus.”

**Translation:** Developed frontal process... Middle frontal process marginalized… Dorsum gray-brown. Lateral caudal appendage last joint with basal joint of tail appendage more than twice longer. Country. Lusitania, Caucasus.

[2]**Description: “**Processus frontalis evolutus... Processus frontalis medius emarginatus... Dorsum nigro-griseum. Appendicum caudalium lateralium ultimus articulus primo articulo fere aequalis.”

**Translation:** “Developed frontal process... Middle frontal process marginalized… Back black-gray. The last article of the lateral caudal appendage is almost equal to the first article. Country. Lusitania."

[3]**Description: “**Untersuchtes Material: 2 dd, 3 y y , West-Balearen, Insel Formentera, Höhle zwischen S. Francisco Javier und S. Fernando, leg. TAM 28-IV-1984 (MZFirenze). Weitere Fundortangaben. "Hispania" (BuDDE- LUND 1879); Balearen; Valencia (BUDDE-LUND 1885); Balearen-Inseln Ibiza und Formentera (VANDEL 1951); Insel Ibiza (ScHmúLzER 1971); Inseln Ibiza und Formentera und die benachbarten Kleininseln Espardell, Penkats, Redona de Santa Eulalia und Cunillera (PABLOS 1963). Meldungen dieser Art aus Marokko (ScHmúLzER 1971: 114), Italien, Sizilien und Griechenland (Rodos) beziehen sich offenbar auf Verwechslungen mit andel ren Arten (vgl. VANDEL 1951), im letzteren Fall auf P. obsoletus. Verbreitung. Gesicherte Funde liegen vor von den westlichen Balearen-Inseln (Pityusen) Ibiza und Formentera. Der von BUDDE-LUND 1885 angegebene Fundort Valencia auf dem gegenüberliegenden Festland bedarf der Bestätigung. Körpermasse. Das oben angegebene untersuchte Material besitzt folgende Maximalmasse: ' 17 mm. lang, 17 mm. breit, Uropoden-Exopodite 2.5 mm. lang., y 17 mm. lang., 7 mm breit, Uropoden-Exopodite 1.8 mm. lang., VANDEL (1951: 112) gibt Längenmasse von 22 mm. + 5 mm. Uropoden-Exopodite für f, 20 mm. für yy an. Bei der Angabe von PABLOS (1963) von 24 mm. ist nicht geklärt, ob mit oder ohne Uropoden gemessen wurde. Diagnostische Merkmale (Abb. 27-32). P. h. sordidus unterscheidet sich durch eine konstante, auffällige Färbung von P. h. hoffmannseggi, die Tiere sind graubraun und gelblich marmoriert, die kräftigen Tergithöcker sind pigmentlos ausser auf Kopf und Pleon, wodurch diese Partien dunkler erscheinen. Des wei- teren ist das Ende des Pleopoden-Exopoditen I d stärker abgeschrägt als bei der Nominatform. Der Grat am Carpus VII d hat seine höchste Stelle im basalen Drittel und ist nach VANDELS Zeichnung offenbar bei grösseren dd höher als bei der Nominatform. Das Ischium VII d hat jedoch dieselbe spezifische Ausprägung wie bei P. h. hoffmannseggi. Aus diesem Grunde folge ich VANDELS An- sicht und betrachte sordidus als Subspezies von hoffmannseggi.”

**Translation:** Examined material: 2 dd, 3 y y, West Balearic Islands, Island of Formentera, cave between S. Francisco Javier and S. Fernando, collected by TAM on April 28, 1984 (MZFirenze). Additional locality information: "Hispania" (BuDDE-LUND 1879); Balearic Islands; Valencia (BUDDE-LUND 1885); Balearic Islands of Ibiza and Formentera (VANDEL 1951); Island of Ibiza (SCHMÖLZER 1971); Islands of Ibiza and Formentera and neighboring smaller islands Espardell, Penkats, Redona de Santa Eulalia, and Cunillera (PABLOS 1963). Reports of this species from Morocco (SCHMÖLZER 1971: 114), Italy, Sicily, and Greece (Rhodes) apparently refer to misidentifications with other species (see VANDEL 1951), in the latter case, with P. obsoletus. Distribution: Confirmed records exist from the western Balearic Islands (Pityusen), specifically Ibiza and Formentera. The reported finding by BUDDE-LUND in 1885 in Valencia on the opposite mainland requires confirmation. Body size: The examined material mentioned above has the following maximum measurements: ' 17 mm long, 17 mm wide, Uropod exopodites 2.5 mm long, y 17 mm long, 7 mm wide, Uropod exopodites 1.8 mm long. VANDEL (1951: 112) provides length measurements of 22 mm for f, and 20 mm for yy. PABLOS (1963) reports a size of 24 mm, but it's unclear whether this measurement includes the uropods or not. Diagnostic features (Fig. 27-32): P. h. sordidus can be distinguished from P. h. hoffmannseggi by its constant, distinctive coloration. These animals are gray-brown with yellowish marbling, and the robust tergite humps lack pigmentation except on the head and pleon, making these areas appear darker. Furthermore, the tip of Pleopod exopodite I d is more sharply angled than in the nominate form. The ridge on Carpus VII d has its highest point in the basal third, and according to VANDEL's drawing, it appears to be higher in larger dd compared to the nominate form. However, the Ischium VII d has the same specific characteristics as in P. h. hoffmannseggi. For this reason, I follow VANDEL's view and consider sordidus as a subspecies of hoffmannseggi.

[4]**Description:** Untersuchtes Material: 1 d (Holotypus, 16 mm. lang, 8 mm., breit, Uropoden-Exopodite 4 mm. lang, genadeltes Trockenpräparat, vor kurzem in Alkohol überführt), "Lusitania" (=Portugal), leg. v. HOFFMANNSEGG (ZMBerlin Nr. 7023, BRANDT 1833); 1 9 (Holotypus von P. emarginatus BRANDT, 1833), "Lusitania" (=Portugal), leg. v. HOFFMANNSEGG (ZMBerlin Nr. 7024, BRANDT 1833 als P. emarginatus); 2 9, SW-Portugal, Portimao, leg. MOLLER 1889 (ZMBerlin Nr. 14827); 2 9, S-Portugal, Mertola, leg. MOLLER IV. 1888 (ZMBerlin Nr. 14827); 1 9, SW-Portugal, Sagres, leg. MOLLER 1889 (ZMBerlin Nr. 14827); 2 y, Portugal, Coimbra (ZSMünchen, VERHOEFF 1937); 1 d, 1 9, S-Spanien, Provinz Cadiz, San Roque, leg. BAEHR & HOFFMANN 24-IV-1981 (SMNS 9080); 1 d, 1 9, S-Spanien, Provinz Cadiz, 8 km NE Tarifa, leg. BAEHP & HOFFMANN 24-IV-1981 (SMNS 9096); 2 d, 2 9, S-Spanien, Provinz Cadiz, 7 km E Jimena de la Frontera, leg. BAEHR & HOFFMANN 23-IV-1981 (SMNS 9091); 2 d, 1 9, S-Spanien, Provinz Cadiz, Jimena de la Frotera, Bergweide, leg. SCHMALFUSS 31-111-1975 (SMNS 9019); 2 d, 2 9, S-Spanien, Provinz Cadiz, 6 km N Algeciras, leg. BAEHR & HOFFMANN 24- IV-1981 (SMNS 9094); 1 d, S-Spanien, Provinz Cadiz, 5 km S Algeciras, leg. BAEHR & HOFFMANN 24-IV-1981 (SMNS 9103); 1 d, 1 9, S-Spanien, Provinz Cadiz, Medina, leg. BAEHR & HOFFMANN 27-IV-1981 (SMNS 9105); 3 cf, S-Spanien, Provinz Malaga, Cuevas del Becerro, leg. BAEHR & HOFFMANN 22-IV-1981 (SMNS 9077); 1 d, S-Spanien, Provinz Malaga, 5 km S Ronda, leg. BAEHR & HOFFMANN 23-IV-1981 (SMNS 9082); 2 d, 2 9, NW-Marokko, Rif-Gebirge, Chechauen, leg. LINSENMAIR, Labornachzucht (SMNS 15335); 1 d (Holotypus von P. h. tamaricis Verhoeff, 1937), NW-Marokko, Gharb-Ebene (ZSMünchen, VERHOEFF 1937); 2 d, 3 9, NW-Marokko, Kap Sparte!, leg. SCHMALFUSS 30-111- 1975 (SMNS 15106); 1 d, 4 9, NW-Marokko, Küste 40 km N Larache, leg. SCHMALFUSS 30-111-1975 (SMNS 15105); 2 juv. y, NW-Marokko, 15 km S Ceuta, leg. GRIMM 30-IX-1985 (SMNS 15334). Weitere Fundortangaben liegen vor aus Portugal, S-Spanien und Marokko (siehe Kap. II). In der Karte Abb. 1 sind alle Funde eingetragen, deren Zugehörigkeit zu P. hoffmannseggi ich als wahrscheinlich betrachte, wobei die ausgefüllten Kreise Fundorte bezeichnen, von denen mir Material vorgelegen hat. Die Meldungen aus Rabat und Tiznit in SW-Marokko (PAULIEN DE FELICE 1939) scheinen mir aus biogeografischen Gründen zweifelhaft und sind auf der Karte nicht berücksichtigt. Verbreitung. Die Nominatform P. hoffmannseggi hoffmannseggi besiedelt die südlichen zwei Drittel von Portugal (nördlichster Fundort Coimbra), S-Spanien (nördlichste Fundort-Angabe Ciudad Real am oberen Guadiana) und N-Marokko. Körpermasse. Maximale Körperlänge (ohne Uropoden) der von mir untersuchten Exemplare 21 mm (Cfl + y). Verlängerte männliche Uropoden-Exopodite maximal 5.2 mm. lang. (C' aus Jimena, SMNS 9091). Alle Ende März bis Ende April gefangenen y y besitzen ein ausgebildetes Marsupium mit Eiern oder Embryonen, die Körperlänge schwankt zwischen 14 und 21 mm. Aus diesem Grunde betrachte ich auch die dazugehörigen dd als erwachsen, mit einer Körperlänge zwischen 12 und 21 mm. Das 12 mm. lange d (Marokko, Kap Sparte!, SMNS 15106) besitzt Uropoden-Exopodite von nur 1.7 mm. Länge, die männlichen Uropoden-Exopodite wachsen also stark allometrisch. Diese Daten erlauben den Schluss, dass die Tiere im Alter von einem Jahr ihre Geschlechtsreife erreichen. Aus den Herbst-Monaten liegt nur ein juveniles y vor (Marokko, SMNS 15334). Es ist demnach anzunehmen, dass die adulten Tiere den trockenen und heissen Sommer nicht überleben und der Lebenszyklus nur eine Brutsaison umfasst. Diagnostische Merkmale. Innerhalb der Gattung Porcellio ist die Art durch folgende Merkmalsausprägungen gekennzeichnet: Eingekerbter Kopfmittellappen (Abb. 2); konkave Hinterränder der 1. Pereon-Epimeren (Abb. 2); gehöckerte Tergite; spitzes Telson-Hinterende (Abb. 3, 4); Relation der Antennengeisselgieder 4:3 (Abb. 5); Carpus VII d mit Grat, dessen höchste Stelle ungefähr über der Mitte des Gliedes liegt (Abb. 6, 7); Ischium VII d ventral eingebuchtet, distal-frontal mit Grube, dessen höchste Stelle ungefähr über der Mitte des Gliedes liegt (Abb. 6, 7); Ischium VII d ventral eingebuchtet, distal-frontal mit Grube, die an den proximalen Seiten von Börstchen-Streifen begrenzt ist (Abb. 6, 7); Pleopoden-Exopodit I d mit parallelseitigem Hinterlappen, das Ende immer eingebuchtet (Abb. 15); lanzenförmige UropodenExopodite des d zwei- bis dreimal so lang wie diejenigen des y (Abb. 3, 4); einfarbig dunkelgrau, oft mit unauffälligen Muskelflecken auf den Tergiten. Variabilität. Die wichtigsten diagnostischen Merkmale von P. hoffmannseggi sind die spezifische Ausprägung des Pereopoden VII d und des Pleopoden-Exopoditen I d. Die Untersuchung zahlreicher Exemplare aus dem gesamten Verbreitungsgebiet hat gezeigt, dass diese Merkmale einer gewissen Variabilität unterliegen, die sich jedoch in engen Grenzen hält und die keine geografische Korrelation zeigt. Carpus VII d besitzt immer einen Grat, der in Form und Ausdehnung etwas verschieden sein kann, dessen höchste Stelle jedoch immer ungefäht über der Mitte des Gliedes liegt (Abb. 6-11). Ischium VII d kann ventral mehr oder weniger eingebuchtet sein, die tiefe distal-frontale Grube ist aber immer vorhanden und an den proximalen Rändern mit Börstchenstreifen gesäumt (Abb. 6, 7, 12-14). Der Pleopoden-Exopodit I d läuft nach hinten in eine parallelseitige Platte aus, das breite Hinterende ist immer zumindest andeutungsweise winkelig eingebuchtet. Die genaue Form der Einbuchtung variiert individuell (Abb. 15, 17-24) und ist selbst am linken und rechten Exopoditen desselben Tieres nicht genau gleich ausgebildet (Abb. 18).

**Translation:**

Examined material: 1 male (Holotype, 16 mm long, 8 mm wide, Uropoden exopodites 4 mm long, pinned dry specimen, recently transferred to alcohol), "Lusitania" (=Portugal), collected by v. HOFFMANNSEGG (ZMBerlin No. 7023, BRANDT 1833); 1 female (Holotype of P. emarginatus BRANDT, 1833), "Lusitania" (=Portugal), collected by v. HOFFMANNSEGG (ZMBerlin No. 7024, BRANDT 1833 as P. emarginatus); 2 females, SW Portugal, Portimao, collected by MOLLER 1889 (ZMBerlin No. 14827); 2 females, S Portugal, Mertola, collected by MOLLER IV. 1888 (ZMBerlin No. 14827); 1 female, SW Portugal, Sagres, collected by MOLLER 1889 (ZMBerlin No. 14827); 2 juveniles, Portugal, Coimbra (ZSMünchen, VERHOEFF 1937); 1 male, 1 female, S-Spain, Cadiz Province, San Roque, collected by BAEHR & HOFFMANN on April 24, 1981 (SMNS 9080); 1 male, 1 female, S-Spain, Cadiz Province, 8 km NE Tarifa, collected by BAEHR & HOFFMANN on April 24, 1981 (SMNS 9096); 2 males, 2 females, S-Spain, Cadiz Province, 7 km E Jimena de la Frontera, collected by BAEHR & HOFFMANN on April 23, 1981 (SMNS 9091); 2 males, 1 female, S-Spain, Cadiz Province, Jimena de la Frontera, mountain meadow, collected by SCHMALFUSS on March 31, 1975 (SMNS 9019); 2 males, 2 females, S-Spain, Cadiz Province, 6 km N Algeciras, collected by BAEHR & HOFFMANN on April 24, 1981 (SMNS 9094); 1 male, S-Spain, Cadiz Province, 5 km S Algeciras, collected by BAEHR & HOFFMANN on April 24, 1981 (SMNS 9103); 1 male, 1 female, S-Spain, Cadiz Province, Medina, collected by BAEHR & HOFFMANN on April 27, 1981 (SMNS 9105); 3 undetermined forms, S-Spain, Malaga Province, Cuevas del Becerro, collected by BAEHR & HOFFMANN on April 22, 1981 (SMNS 9077); 1 male, S-Spain, Malaga Province, 5 km S Ronda, collected by BAEHR & HOFFMANN on April 23, 1981 (SMNS 9082); 2 males, 2 females, NW Morocco, Rif Mountains, Chefchaouen, laboratory breeding (SMNS 15335); 1 male (Holotype of P. h. tamaricis Verhoeff, 1937), NW Morocco, Gharb plain (ZSMünchen, VERHOEFF 1937); 2 males, 3 females, NW Morocco, Cape Spartel, collected by SCHMALFUSS on March 30, 1975 (SMNS 15106); 1 male, 4 females, NW Morocco, coast 40 km N Larache, collected by SCHMALFUSS on March 30, 1975 (SMNS 15105); 2 juvenile males, NW Morocco, 15 km S Ceuta, collected by GRIMM on September 30, 1985 (SMNS 15334). Further locality data are available from Portugal, S-Spain, and Morocco (see Chapter II). In the map Fig. 1, all records are plotted, and I consider their affiliation to P. hoffmannseggi as likely, with filled circles indicating locations where material was available to me. Reports from Rabat and Tiznit in SW Morocco (PAULIEN DE FELICE 1939) appear doubtful to me for biogeographical reasons and have not been considered on the map. Distribution: The nominate form P. hoffmannseggi hoffmannseggi inhabits the southern two-thirds of Portugal (northernmost locality Coimbra), S-Spain (northernmost locality Ciudad Real at the upper Guadiana), and N-Morocco. Body size: Maximum body length (excluding uropods) of specimens examined by me is 21 mm (Cf + y). Elongated male uropod exopodites are a maximum of 5.2 mm long (C' from Jimena, SMNS 9091). All female individuals collected from late March to late April have developed marsupia with eggs or embryos, with body lengths ranging between 14 and 21 mm. For this reason, I consider the associated males (dd) as adults, with body lengths ranging from 12 to 21 mm. The 12 mm long male (Morocco, Cape Spartel, SMNS 15106) has uropod exopodites of only 1.7 mm in length, indicating strong allometric growth of male uropod exopodites. These data suggest that individuals reach sexual maturity at one year of age. Only a juvenile male (Morocco, SMNS 15334) was found in the autumn months, suggesting that adult individuals do not survive the dry and hot summer, and their life cycle comprises only one breeding season. Diagnostic features: Within the genus Porcellio, the species is characterized by the following morphological traits: notched head mid-lobe (Fig. 2); concave hind margins of 1st pereon epimera (Fig. 2); humped tergites; pointed telson posterior end (Figs. 3, 4); antenna flagellum articles in a 4:3 ratio (Fig. 5); Carpus VII d with a ridge, with its highest point approximately in the middle of the segment (Figs. 6, 7); Ischium VII d ventrally incised, distally frontal with a pit, with its highest point approximately in the middle of the segment (Figs. 6, 7); Ischium VII d ventrally incised, distally frontal with a pit, bordered by bristle rows on the proximal sides (Figs. 6, 7); Pleopod exopodite I d with a parallel-sided posterior lobe, its end always slightly notched (Fig. 15); lance-shaped uropod exopodites in males are two to three times longer than those in females (Figs. 3, 4); unicolored dark gray, often with inconspicuous muscle spots on the tergites. Variability: The most important diagnostic features of P. hoffmannseggi are the specific characteristics of Pereopod VII d and Pleopod exopodite I d. The examination of numerous specimens from the entire distribution range has shown that these traits exhibit some variability, which, however, remains within narrow limits and does not show any geographical correlation. Carpus VII d always has a ridge, which can vary in shape and extent, but its highest point is always roughly in the middle of the segment (Figs. 6-11). Ischium VII d may be more or less ventrally incised, but the deep distally frontal pit is always present and bordered by bristle rows on the proximal margins (Figs. 6, 7, 12-14). Pleopod exopodite I d extends backward into a parallel-sided plate, and its wide posterior end is always at least slightly notched. The exact shape of the notch varies individually (Figs. 15, 17-24) and is not precisely the same on the left and right exopodites of the same individual (Fig. 18).

[5]**Full Untranslated Email:**

“Estimado Nathan,

Le escribo en español ya que mi inglés es muy malo, pero no creo que tenga problemas para traducirlo.

En relación a su consulta, primero indicarle que la denominación "Sevilla" para este Porcellio procede del criador y vendedor del mismo, del cual obtiene diferentes variantes de coloración.

En la naturaleza está especie presenta una amplia variabilidad.

La coloración va desde negro a marrón oscuro, con manchas amarillentas o sin ellas, con los pleuroepímeros blancos, pero con mayor o menor extensión del pigmento por lo que en algunos ejemplares son negros o marrones.

En el céfalon los lóbulos laterales son más o menos grandes y el lóbulo medio puede ser redondeado o escotado.

Las granulaciones del tegumento están más o menos marcadas en diferentes individuos, algunos son casi lisos.

Además en el macho, la alometría hace que las antenas sean algo más largas; el pereiópodo 7 tenga una cresta más o menos grande; los exopoditos de los urópodos sean mucho mayores que en la hembra y el exopodito del pleópodo 1 sea más o menos largo y más o menos truncado diagonalmente en el extremo.

Ante esta variabilidad de numerosos caracteres, destaca la constancia de la morfología de las sedas-escamas, por lo que son muy útiles para la determinación de las especies de este género. Le adjunto un PDF.

Yo he tenido ocasión de estudiar algunos ejemplares de este criador, así como numerosos ejemplares de la naturaleza y el de la foto es sin duda Porcellio hoffmannseggii.

Espero que estás notas le sirvan.

Reciba un cordial saludo,

Julio Cifuentes”