OPINIONS RENDERED BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

OPINIONS 78 TO 81

OPINION 78

CASE OF DERMACENTOR ANDERSONI VS. DERMACENTOR VENUSTUS

SUMMARY.—On basis of the premises presented, the Commission is of the Opinion that *Dermacentor venustus* dates from Marx in Neumann, 1897, type specimen Collection Marx No. 122 (U. S. National Museum), from *Ovis aries*, Texas, and that *Dermacentor andersoni* dates from Stiles, 1908, holotype U. S. P. H. & M. H. S. 9467, from Woodman, Montana.

STATEMENT OF CASE.—This case has been submitted to the Commission by W. Dwight Pierce in the following letter, W. Dwight Pierce to Stiles:

Feb. 18, 1920: The recent publication of Wolbach's excellent monograph on Rocky Mountain Spotted Fever, again brings critically before the medical profession the confusion as to the name of the spotted fever tick. In order that we may get at this thing right and forever legally settle this name I appeal to the International Commission to give us a definite ruling on the proper name of the Rocky Mountain Spotted Fever Tick. In order that this ruling may be based on absolutely fair and just premises I would request that statements be requested of Dr. C. W. Stiles, Mr. Nathan Banks, Mr. F. C. Bishopp, and Dr. Nuttall, and others if necessary, these statements to be used as briefs and to be published with the ruling. My personal conclusions are as follows:

1. That there is no question whatever that *Dermacentor andersoni* Stiles (1905) refers to the Rocky Mountain Spotted Fever Tick.

2. That there is debatable ground as to whether *D. venustus* Banks (1908) is conspecific and refers to the fever tick.

3. The first reference I find to *D. venustus* Marx mss. is in Neumann (1897) as a synonym of *D. reticulatus* Fabricius, undescribed.

4. *Dermacentor andersoni* Stiles was described as the fever tick, in 1905, (U. S. Treas. Dept., Hyg. Lab., Bull. 20, pp. 1-119) and the description strengthened in 1908 and 1910.

5. In 1908 Banks drew up the description, as a new species, of *D. venustus* (Marx mss.), from the Marx material, which was subsequently examined by Stiles, and found to consist of three lots of material of at least two species. Stiles definitely picked from Bank's type material Marx No. 122 as type of

the species *D. venustus*. This was Texas material. Since both Marx and Banks confused more than one species and neither designated an individual type from the material, Stiles' designation is valid.

6. In 1910 Stiles differentiated between the two species *D. andersoni* and *D. venustus*, using the designated type individuals as basis of his differentiation.

7. It therefore appears to me that *D. andersoni* not only is definitely the fever tick, but that it antedates *D. venustus* Banks, which may have originally had specimens of the fever tick contained within its series, but which when typically defined according to our laws of nomenclature is a very different species, with a range extraterritorial to the fever area.

8. The entire medical profession would welcome a final legal decision on this name at the earliest possible moment.

In accordance with Pierce's suggestion, the Secretary has invited Mr. Banks, Mr. Bishopp, and Doctor Nuttall to submit statements. No reply has been received from Nuttall.

Banks submits the following letter:

Cambridge, Mass., April 29, 1920: As far as I am concerned there is no "question" as to the name of the Rocky Mt. Spotted Fever Tick, and no decisions of any committee can alter facts. *D. venustus* was published in 1908, *D. andersoni* a few months later. All previous references to either name had nothing to do with the matter, as there was no description till that time. *D. andersoni* of 1905 was not referred to as the fever tick but as the tick that did *not* carry the disease.

Type label was placed on a certain vial of *D. venustus* at time of publication and anyone who examined the collection of the Bureau of Entomology would have found it.

Later attempts at limitation of the name cannot alter the facts.

Bishopp submits the following:

Dallas, Texas, May 1, 1920: I am enclosing herewith a statement on this subject which I drew up in 1912, which I believe sets forth my viewpoint in a rather concise way.

THE CORRECT NAME OF THE ROCKY MOUNTAIN SPOTTED FEVER TICK

By F. C. Bishopp

There is considerable confusion regarding the correct scientific name of the tick which transmits Rocky Mountain spotted fever. As the several statements which have been made upon this question do not seem to have cleared the matter up, it seems best to briefly review the situation and show the exact status of the question.

Labels bearing the name *D. venustus* n. sp. were placed by Marx in vials containing specimens of ticks from Soldier, Idaho, Las Cruces, N. M., and Texas (on sheep). All of these specimens were deposited in the U. S. National Museum. No manuscript notes or drawings were left with this material.

After the death of Dr. Marx, these specimens together with other material from the Marx collection, were sent to Prof. L. G. Neumann for study. In

1897 Neumann, after studying this material, considered it the same as the European *D. reticulatus,* the manuscript name *D. venustus* being cited in identifying the specimens from the United States.

In 1905 Stiles used the name *andersoni* for material from Montana, concluding that the species did not transmit the disease known as Rocky Mountain spotted fever. This was a *nomen nudum* as it was unaccompanied by a description or by a specific indication. In June, 1908, Banks, after studying all of the Marx material, described the species, using the Marx name *D. venustus.* He used one of the males from Soldier, Idaho, as the type for his species. By doing this Banks repudiated Neumann's placing the species as a synonym of *reticulatus.* The name *venustus* cannot date from 1897 because Neumann did not specifically differentiate this species from his *reticulatus,* but confused it with his material. Banks, by describing this species in 1908, gave it a standing in nomenclature as a distinct species. In July, 1908, Stiles, after studying part of the Marx material exclusive of Banks' type of *D. venustus,* briefly described specimens from Montana under the name *D. andersoni.* Subsequently, Aug. 1910—(Taxonomic Value of the Microscopic Structure of the Stigmal Plates in the Tick Genus, *Dermacentor,* Bull. No. 62, Hygienic Laboratory), Stiles applied the name *D. venustus* to the Texas material which was contained in the Marx collection, and designated this as the type of the species. He stated that the New Mexico material could not be positively identified and that the Idaho specimen was not sufficient to base a determination upon. In this publication he fully described certain Montana material under the name *D. andersoni.*

On Oct. 29, 1910, in the JAMA, Stiles reiterates Banks' statement that Neumann was incorrect in placing *D. venustus,* Marx's manuscript, as a synonym of *D. reticulatus* but claimed that *venustus* should date from Neumann, 1897. In the last paragraph of this statement he says "Were the premise correct that Marx's specimens from Texas and New Mexico are identical with the specimens from Montana, *D. venustus* would of necessity be the correct name for the Rocky Mountain spotted fever tick, but this premise is erroneous and the name *venustus* must be applied to the species containing the original specimens designated under this name." We must take exception to the last portion of this sentence, as a part of the material labeled *D. venustus* by Marx (specimens from Soldier, Idaho), is identical with the form found in Montana and called *D. andersoni* by Stiles. One of these males from Soldier, Idaho, was designated as type of *D. venustus* by Banks. A careful comparison of this type specimen with Stiles' type of *D. andersoni* shows the two species to be identical and there is no question that this is the form which conveys Rocky Mountain spotted fever. Hence *D. andersoni* is a synonym of *D. venustus,* and if Stiles is correct in his belief that the specimens from "Texas on sheep" are specifically different from *D. venustus* of Montana, this species requires another name.

Stiles submits the following statement to the Commission:

1. In Summary, I submit to the Commission the following points:

   a. Under the International Rules, the name *D. venustus* dates from Marx in Neumann, 1807a, 365. (Art. 25; Opinion of *Halicampus grayi* 1856, ruled upon in Opinion No. 53.)

b. It would require, under the By-Laws, a two-thirds vote of the Commission to reverse Opinion 53 in the case of *D. venustus.*

c. As the orginal publication of *D. venustus* 1897 mentioned only two localities (New Mexico and Texas), only these two localities and no other come into consideration as type locality. (Not covered by the International Rules but in harmony with Zoological practice.)

d. The only original specimens of Marx's *D. venustus* mentioned by Neumann in 1897 have been found and identified, and only these come into consideration as type specimens. (Not covered by International Rules, but in harmony with Zoological practice.)

e. Marx No. 122, from Texas, host *Ovis aries,* is the first and the only originally published specimen publicly or privately designated as type specimen and this must remain type specimen. (Not covered by the International Rules, but in harmony with Zoological practice.)

f. *D. venustus* n. sp. Banks, 1908, is antedated by *D. venustus* 1897, hence is a homonym, hence is to be suppressed. (Art. 35.)

g. It is generally admitted (by Banks, Bishopp, Stiles, etc.) that *D. venustus* n. sp. Banks, 1908, is specifically identical with *D. andersoni* Stiles, (1905) 1908, but evidence is not lacking that it also contains Marx's specimens 120 from New Mexico and 122 from sheep in Texas. The only specimen of *D. venustus* 1908 known to have the label of "type" in Banks' handwriting is in the U. S. National Museum (Marx No. 10) and although Banks specifically states that his type belongs in the collection of the Bureau of Entomology, the Museum specimens can be taken as Banks' type until evidence of error is presented; this specimen seems to be specifically identical with *D. andersoni* [but as it is a single specimen, it has not been mounted]. Accordingly, *D. venustus* Banks, 1908, (nec Marx, 1897) is synonymous with *D. andersoni* Stiles (1905) 1908.

h. Under the International Rules *D. andersoni* is the earliest available name for the Rocky Mountain Spotted Fever Tick, hence (Art. 25, 35) it is the valid name.

i. As a matter of propriety, I will refrain from utilizing my Commissioner's right of vote on this case, since it involves a name proposed by myself, but I obligate myself to accept the decision of the Commission as determined by the By-Laws.

j. The following documents are submitted to the reviewing Commissioner (Stejneger) either in original or in copy, in connection with this case.

BANKS, 1908.—Revision of the Ixodoidea < Tech. Series, No. 15, Bureau of Entomology.

1910.—The Scientific Name of the Spotted Fever Tick < JAMA, v. 55 (18), 1574-1575.

? 1908.—Undated letter, Banks to Stiles regarding type specimen of *D. venustus.*

NEUMANN, 1897a.—Revision de la famille des Ixodidés. (2e mémoire) < Mém. Soc. Zool. France, Par., v. 10 (3-4), pp. 324-420.

STILES, 1905f. —A Zoological Investigation, etc., < Bull. 20, Hyg. Lab.

1907. —[Transcript of Minutes, Ent. Soc. Wash., Jan. 10, 1907, pp. 10-11, giving Secretary's abstract of Stiles' paper on stigmal plates of the genus *Dermacentor.*]

1908m.—The common tick (*Dermacentor andersoni*) of the Bitter Root valley < Pub. Health Rep., U. S. Pub. Health & Mar.-Hosp. Serv., Wash., v. 23 (27), p. 949.
1908. —Copy of letter, Stiles to Banks, June 10.
1909. —Copy of letter, Stiles to Banks, Mar. 19.
1909. —Copy of letter, Stiles to Banks, Oct. 23.
1910. —The taxonomic value of the microscopic structure of the stigmal plates in the tick genus *Dermacentor* < Bull. 62, Hyg. Lab.
1911. —Letter, Stiles to Banks, Feb. 20.

2. The first actual publication of the name *Dermacentor venustus* occurs in Neumann (1897a, 365) who examined specimens of ticks from the Marx collection, and determined them as *Dermacentor reticulatus*. His original reads as follows:

"D'Amérique, j'en ai 2 femelles originaires du Mont Diablo, en Californie (Coll. de l'Acad. des sciences de Californie). La Collection du Départ. of Agriculture de Washington et celle de la Smithsonian Institution en contiennent plusieurs mâles et femelles recueillis aussi en Californie, sur le Daim, et étiquetés par G. Marx *D. occidentalis*. D'autres proviennent du Texas et du Nouveau-Mexique et sont étiquetés *D. venustus*. Je rapporte aussi à la même espèce 9 mâles et 1 femelle, jeunes, à patine blanche encore peu marquée, à coloration génèrale brun foncé, provenant de Las Paz (?) et appartenant au Muséum de Berlin."

3. Accordingly, *D. venustus* was first published as a synonym of *D. reticulatus* and the original publication clearly cites Texas [Marx 122] and New Mexico [Marx 120] as the first published, hence type localities, unless it can be shown that Marx designated some other specimens from some other locality as type specimens.

4. The first point which arises is whether or not the manuscript or label name *D. venustus* received nomenclatorial status in this publication by Neumann. The answer to this question is found in three opinions already issued by the Commission, namely, Opinions Nos. 1, 4, and 53.

5. Status of a Manuscript Name published in Synonymy.—Article 25 of the Code reads:

"The valid name of a genus or species can be only that name under which it was first designated, on the condition:

(a) That this name was published and accompanied by an indication, or a definition, or a description; and

(b) That the author has applied the principles of binary nomenclature."

6. As Neumann (1897a) is both binary and binomial, the decision reverts to "(a)." This point has been discussed in several opinions, thus:

7. Opinion 1 states: "The word *indication* in Art. 25a is to be construed as follows: (A) with regard to specific names, an indication is (1) a bibliographic reference, or (2) a published figure (illustration), or (3) a definite citation of an earlier name for which a new name is proposed."

8. Opinion 4 states: "Manuscript names acquire standing in nomenclature when printed in connection with the provisions of Art. 25, and the question as to their validity is not influenced by the fact whether such names are accepted or rejected by the author responsible for their publication."

9. Opinion 53 covers a case identical with the one at issue, namely the status of "*Halicampus grayi* Kp. British Museum," published as synonym of "*Halicampus conspicillatus,*" corresponding exactly to *Dermacentor venustus,* Collection Marx, U. S. Nat. Mus., published as synonym of *D. reticulatus.* In Opinion 53, written by Stejneger and Stiles, concurred in by 9 Commissioners, dissented from by 2 Commissioners, *Halicampus grayi* 1856 was recognized under Art. 25 and Opinion 4 as published and hence as available and was given precedence over *H. koilomatodon* (about 1865).

10. According to the By-Laws of the Commission, an Opinion cannot be reversed by less than a two-thirds vote. Opinion 53 has never before come up for reversal and unless a two-thirds vote now obtains against Opinion 53, *D. venustus* must be accepted as available from the date of 1897.

11. As *D. venustus* Marx in Neumann, 1897, is under Opinion 53 clearly to be accepted as a *published* and *available* name, and not as a *nomen nudum,* it remains to enquire into its validity. Two possibilities present themselves, namely,

a. Is *D. venustus* a synonym of *D. reticulatus,* as assumed by Neumann? If Neumann's view is sustained, the name *D. venustus* is clearly not valid for *D. reticulatus* unless it be shown that no earlier name for this species is available. But even then, as a synonym of *D. reticulatus* it would preclude its (*venustus*) later use for any other species.

b. Is *D. venustus* Marx in Neumann distinct from *D. reticulatus?* In other words, should *D. reticulatus* as defined by Neumann be sub-divided? All authors now agree that it should be, and that certain American (Marx) specimens of *D. reticulatus* (*D. venustus*) represent a distinct species.

12. Under this latter premise it is necessary to determine if possible the type specimen and the type locality of *D. venustus* Marx in Neumann.

13. Obviously, the type locality can be only the originally published locality and the type specimens can be only the originally published specimens. Fortunately, Neumann has given definite information as to the locality, namely, the United States of North America and he specifically cites two States, namely, Texas and New Mexico. Fortunately, it is possible to identify the original specimens also, on basis of the following data:

14. When Neumann returned the Marx material to the U. S. National Museum I borrowed the specimens. The exact date when these came into my hands does not appear to be recorded in my notes. There were three bottles which contained the name *D. venustus* on labels, namely, Marx No. 120, one male, from New Mexico; No. 121, one male from Soldier, Idaho, host, Mountain Goat; and No. 122, 3 males, 1 female, from Texas, host, *Ovis aries.* [See below, under Stiles, 1910.] It seems obvious that Nos. 120 and 122 represent the Marx material, and the only specimens of Marx's *D. venustus* mentioned by Neumann, 1897a, hence, only these two are available as type material. Later Stiles (1910, 44-46) definitely published Marx No. 122 as the type specimen. This is the first (and so far as I know, the only) publication of the Museum number of the type.

15. From copies of correspondence in my files it is clear that I returned Marx 122 to the U. S. National Museum accompanied by a letter dated March 19, 1909; and that I returned Marx 120 and 121 to the U. S. National Museum accompanied by a letter dated February 20, 1911.

16. My letter files also show that in answer to a letter from me dated Oct. 23, 1909, asking where the types of *D. parumapertus marginatus* and *D. nigrolineatus* were deposited, Mr. Banks replied (in an undated letter) that the type of *D. p. marginatus* was in his private collection, "the type of *Derm. venustus* in Bur[eau] Entom[ology] Coll[ection]," that of *D. nigrolineatus* in the Mus. Comp. Zool., Harvard, "cotypes or paratypes of *D. nitens* in Marx Coll., U. S. N. Mus." and of "*D. parumapertus* and *D. occidentalis*, also Marx coll., at least paratypes." It will be observed that this statement (namely, that the type of *D. venustus* is in the collection of the Bureau of Entomology [no mention of Marx collection]) is in harmony with Mr. Banks' statement of April 29, 1920. The Marx collection has at no time been the property of the Bureau of Entomology.

17. On Dec. 6, 1920, in the presence of Prof. H. E. Ewing, of the Bureau of Entomology, I examined three bottles of ticks at the U. S. National Museum, as follows: Marx 121 and 122 (see *supra*). Also a bottle containing the label "No. 10. *Dermacentor venustus* Marx Idaho Coll. Marx." This bottle also contains a paper with the word "type" written in a handwriting identified by Professor Ewing as that of Banks. The Marx label is in a different handwriting from that of Marx 121 and 122. This Marx 10 is not Marx 120.

18. Here is, accordingly, a bottle attributed to the Marx Collection which I had never seen prior to Dec. 6, 1920. It contains no label written either by Marx, by Neumann, or by E. A. Schwartz (who went over the Marx collection after Marx's death). Schwartz identifies the Marx label as probably written by C. V. Piper. That this specimen is not available as type specimen of *D. venustus* Marx in Neumann follows from the fact that Neumann (1897a) did not refer to any specimens from Idaho.

19. The fact that Banks twice states that the type of *D. venustus* is in the Bureau of Entomology Collection while the specimen with the label "No. 10, Coll. Marx," contains a slip of paper bearing the word "type" in Banks' handwriting is not, therefore, of special importance so far as the date 1897 is concerned, but comes into consideration in connection with the date 1908.

20. Banks (1908, 46-47, 55, pl. 8, figs. 4, 5, 7) described *Dermacentor venustus* n. sp. Banks. In addition to the specific description, which is clearly influenced chiefly by material from the Northwest, Banks states:

> "Specimens come from various places in the West; Olympia, Yakima, Klikitat Valley, and Grand Coulee, Wash.; Fort Collins and Boulder, Colo.; Pecos and Las Cruces, N. Mex.; Bozeman, Mont.; Bridger Basin, Utah; Soldier, Idaho, and Texas (on sheep).
>
> "This species is quite common in the Northwest. It has been included in *D. occidentalis*, by Neumann, but was separated out by Doctor Marx in manuscript under the name I have adopted. It is larger than *D. occidentalis*, with more red and less white in the coloring, and differs in many minor points of structure, as size of porose areas, size of hind coxae in male, etc. This is the species supposed to be concerned in the transmission of spotted fever in Montana."

21. It will be noticed that Banks cites specimens from "Pecos and Las Cruces, N. M." and "Texas (on sheep)" and that he says it was separated out from *D. occidentalis* "by Doctor Marx in manuscript under the name I have adopted." Banks does not cite the museum number of the type specimen.

22. The status of *D. venustus* n. sp. 1908 and its type specimen must be determined. Theoretically, three possibilities are present, namely:

a. *D. venustus* n. sp. Banks, 1908, might be identical with *D. venustus* Marx in Neumann, 1897; or

b. *D. venustus* n. sp. Banks, 1908, might represent a new species; or

c. *D. venustus* n. sp. Banks, 1908, might be *D. venustus* 1897 plus another species.

23. Is *D. venustus* n. sp. Banks, 1908, identical with *D. venustus* Marx in Neumann, 1897? Banks distinctly states that he adopts the name from Marx's manuscript. Neither Bishopp nor I have been able to find this manuscript, so possibly reference is made to the labels in the bottles. Banks quotes among the localities, "Las Cruces, New Mexico," "Soldier, Idaho," and "Texas (on sheep)." These three localities are in harmony with the Marx specimens Nos. 120, 121, 122. The presumption therefore would seem to be that Banks examined these three specimens. I am in a position to state that these three specimens, with drawings of No. 122, and with my manuscript giving No. 122 as type of *D. venustus* were placed on a table in my laboratory in front of Mr. Banks for examination prior to the publication of his paper. Bishopp (see *supra*) states that Banks studied "all of the Marx material" and this would seem to include Marx 120, 121, and 122. Banks, however, (1910, JAMA, 1574-1575) states that he never studied Marx 120 and 122 (namely the specimens published by me in 1910 as *D. venustus*). If Banks' *D. venustus* is identical with Marx's *D. venustus* as published in Neumann, the species should be attributed to Marx.

24. Is *D. venustus* n. sp. Banks, 1908, distinct from *D. venustus* Marx in Neumann, 1897? If this represents the correct status of facts, then *D. venustus* Banks, 1908, is a homonym of *D. venustus* 1897 and therefore cannot be used as a valid name.

25. Does *D. venustus* n. sp. Banks, 1908, include *D. venustus* Marx in Neumann, 1897, plus some other species? If this be the status of affairs, it is clear that such portion of *D. venustus* of Banks, 1908, as agrees with *D. venustus* 1897 should be allocated to *D. venustus* 1897 and that the remaining portion should be known under some other name.

26. It would appear, therefore, that the crux of the problem lies in establishing the type specimen of *D. venustus* of Banks, 1908. The evidence at my disposal, bearing on this point, is as follows:

27. Banks has twice stated in letters that the type of his *D. venustus* of 1908 is in the Collection of the Bureau of Entomolgy. He has also stated in a letter that "type label was placed on a certain vial of *D. venustus* at time of publication." Bishopp states that Banks "used one of the males from Soldier, Idaho, as type for his species." In the presence of Professor Ewing, Dec. 6, 1920, I established the fact that there is in the National Museum a specimen marked "Coll. Marx, *Dermacentor venustus* Marx Idaho," and that the bottle contains a label, identified by Ewing as in Banks' handwriting, reading "type."

28. The Marx specimen from "Soldier, Idaho," No. 121, was in my laboratory at the time Banks visited me in order to examine Marx's specimens, and it is not the specimen containing Banks' label "type." Banks (1910, JAMA, 1574-1575) states that his *D. venustus* 1908 is identical with my *D. andersoni*, and this view is in harmony with the specimen which bears Banks' label

"type." How and whether this specimen changed from the Bureau of Entomology Collection to the Marx Collection is as yet not clear.

29. Judged from the specimen containing Banks' label "type," *D. venustus* n. sp. Banks, 1908, falls, therefore, as a homonym of *D. venustus* Marx in Neumann, 1897, and it is either a synonym or it is not a synonym. To determine this latter point, it is necessary to examine Stiles (1910) who reexamined the specimens (Marx 120 and 121 from New Mexico and Texas) of *D. venustus* Marx published by Neumann, 1897. Specimen 122 (mentioned by Neumann) and selected by Stiles as type is specifically distinct from the specimen which bears Banks' label as representing the type of *D. venustus* Banks, 1908. As this was the first selection of any specimen of the Marx-Neumann (1897) material as type, and as the Idaho material was not available as type, since it was not mentioned by Neumann (although Marx 121 from a mountain goat, at Soldier, Idaho, was examined by him), a comparison of the type specimens in question, namely, Marx 120 (type of *D. venustus* Marx in Neumann, 1897, as published by Stiles, 1910) with Marx No. 10 (type of *D. venustus* Banks, 1908, according to the label in Banks' handwriting, but not entirely in harmony with his correspondence) appears therefore to settle the question that nomenclatorially *D. venustus* 1908 is not absolutely (from point of view of type specimen) synonymous with *D. venustus* 1897. Accordingly, the name *D. venustus* n. sp. Banks, 1908, drops as a homonym.

30. It next becomes necessary to enquire into the valid name for the species represented by *D. venustus* n. sp. Banks, 1908 (*nec* Marx in Neumann, 1897) incriminated as vector of Rocky Mountain Spotted Fever.

31. The systematic history of this tick is indeed complicated, owing to the difficulties connected with specific determinations. It has been studied by Marx, Neumann, Banks, and Stiles, all four of whom were fairly familiar with the group. These specialists confused the species with: *D. occidentalis, D. venustus, D. electus*, and *D. reticulatus*. These various species were not all clearly and definitely defined from each other until 1910, although all four of the authors just mentioned, and other authors also, had at various times determined a number of specimens correctly.

32. Anderson collected in the Bitter Root Valley some ticks which Wilson & Chowning and Anderson had incriminated as the vector of the Rocky Mountain Spotted Fever. Stiles (in Anderson, 1903, 21) made a provisional determination of this material as *Dermacentor reticulatus*.

33. Stiles (1904 1(m), 1649 (363)) obtained from the Bitter Root Valley a considerable amount of tick material which agreed with the tick which Wilson & Chowning (1902, 1903, 1904) and Anderson (1903) had incriminated as the vector of Rocky Mountain Spotted Fever. Stiles states:

> "6. The tick most common in the valley is a dermacentor which is very closely allied to *D. reticulatus*. The data now at my disposal indicates, however, that it represents a distinct species."
>
> "7. These ticks are common on horses, cattle, and dogs, and more or less frequent on man, but there is nothing to indicate that a hibernating animal is necessary for their development; in fact, indications (seasonal distribution) are not entirely lacking that the spermophile forms a more or less accidental host for this species."

34. Later, Stiles (1905f, 7, 22, 24) in discussing his negative results as to the piroplasmic nature of the Rocky Mountain Spotted Fever, uses the new

name "*Dermacentor andersoni*" in referring to this tick which Wilson & Chowning (1902, 1903, 1904) and Anderson (1903) had incriminated as vector of the supposed *Piroplasma hominis*. Zoological characters are not cited and so far as this article is concerned, the name *Dermacentor andersoni* rests solely upon the geographic distribution of the tick and the earlier claims that this arachnoid is the vector of the disease.

35. Later, Stiles (1907, 10-12) presented to the Entomological Society of Washington drawings of *D. andersoni, D. venustus, D. occidentalis,* etc., demonstrating the differential characters on which the species in question are recognizable, but these names were not published in the Secretary's minutes of the meeting. Mr. Banks was present and discussed the paper.

36. After the meeting, Mr. Banks asked to examine some of the specimens and was invited to do so. For this purpose he visited my laboratory (exact date unknown, but between Jan. 10, 1907 and June 6, 1908). I placed before him the manuscript, drawings, and specimens, and a miscroscope; he used his own hand lens. Among the specimens placed before him were "Marx·120, 121, 122." Mr. Banks examined some of the drawings and specimens; as he was received as a guest he was free to do this.

37. Upon the publication of *D. venustus* n. sp. Banks, 1908, Stiles, in the hope of forestalling further confusion, published (1908m, 949) a short note giving some of the more important differential characters.

38. Later, Stiles (1910, 36-46) published his delayed manuscript, describing and figuring in detail *D. andersoni* Stiles (type No. 9467, from Woodman, Mont.) (giving *D. venustus* pars of Banks, 1908, as synonym) and *D. venustus* Marx, 1897, in Neumann, 1897 (type Marx 122 from Texas) giving *D. venustus* pars of Banks, 1908, as synonym).

Discussion.—The present case, to my mind, is much less complicated than the argument submitted would indicate.

The facts appear to be as follows:

1. In 1897 G. Neumann (Mem. Soc. Zool. France, vol. 10, pp. 324-420) published a "Révision de la famille des Ixodidés," in which under the specific heading of *Dermacentor reticulatus* (Fabricius), up to that time known only from the Old World, he says on p. 365: "La Collection du Départ. of Agriculture de Washington et celle de la Smithsonian Institution en [*i. e., D. reticulatus*] contiennent plusieurs mâles et femelles receuilles aussi en Californie, sur le Daim, et étiquetés par G. Marx *D. occidentalis*. D'autres proviennent de Texas et du Noveau-Mexique et sont étiquetés *D. venustus*." There is no further reference to these specimens, and this is the first published reference to *Dermacentor venustus*. Although there is no description, the name is not a *nomem nudum,* since according to Opinion 53 it has a nomenclatorial status that cannot be ignored. The case is absolutely comparable, though not quite identical, with that of *Halicampus grayi,* quoted only in synonymy as being in the British Museum, but not described, regarding which Opinion 53 says that "there can be no question but that *Halicampus grayi* has been pub-

lished in connection with a bibliographic reference, and in connection with a description, and on this account the name must be considered as dating from 1856." As Opinion 53 is in force and consequently is part of the Code, it is clear that *Dermacentor venustus* as a published and available specific name dates from 1897. But it is also unidentifiable from the published data then available. Dr. Neumann himself apparently thought it the same as *reticulatus,* but he gives no data by which it can be determined from his publication whether he was right or wrong. The reference to certain localities can have no bearing, nor is there any indication that he referred to actual type specimens. Marx's type specimens may have been examined, or they may not, as far as contemporaneous published evidence is concerned.

The next appearance of the name in any publication is in 1908 when Banks (A Revision of the Ixodoidea, or Ticks, of the United States, June 6, 1908, p. 46, pl. 8, figs. 4, 5, 7) described *Dermacentor venustus* as a new species without reference to Marx's manuscript name of 1897 in Neumann. He mentions neither a type specimen, nor does he give any single type locality. He says: "Specimens come from various places in the West: Olympia, Yakima, Klikitat Valley, and Grand Coulee, Wash.; Fort Collins and Boulder, Colo.; Pecos and Las Cruces, N. Mex.; Bozeman, Mont.; Bridger Basin, Utah; Soldier, Idaho; and Texas (on sheep)." On page 48, under *D. occidentalis,* he says: "Neumann first considered *D. occidentalis* and *D. venustus* of Marx as identical with the European *D. reticulatus.* . . . . When he described *D. occidentalis,* Neumann included with it *D. venustus* of the Marx manuscript. However, I have restricted the name to the form to which Marx applied it." This last sentence is not strictly correct. When Neumann described *D. reticulatus occidentalis,* which was done in January, 1905 (Arch. Parasitol., Paris, vol. 9, no. 2, p. 235), he did not mention *D. venustus* at all; he only recognized several ♂ and ♀ collected on "le Daim," California, and labeled *D. occidentalis* by G. Marx, as a distinguishable subspecies [variété] of the species *D. reticulatus,* in other words, in 1905 he recognized his species *D. reticulatus* of 1897, as a complex one including still the material which Marx had labeled *D. venustus,* and with the right of the first reviser he separated out and fixed the name of *D. occidentalis.* But he did nothing to *D. venustus;* he still kept it in the synonymy of *D. reticulatus.* Banks, however, in 1908, accepted Neumann's action as first reviser, as far as *D. occidentalis* is concerned (recognizing it however as full species), but went a step further and exercised *his* right as next reviser to segregate Marx's *D. venustus* out of the complex *D. reticulatus* of Neumann 1897. In the

D. venustus thus restricted, Banks included specimens from Washington, Colorado, New Mexico, Montana, Utah, Idaho, and Texas. No type locality, nor type is mentioned, as stated before. In the absence of definite type designation the presumption in 1908 is, therefore, that the *D. venustus* of 1908 and the one of 1897 are identical.

Later in the same year Dr. Stiles (Weekly Pub. Health Rep., vol. 23, pt. 2, nos. 27 to 52, July 3, 1908m, p. 949) briefly indicated that Banks' *D. venustus* of 1908 was still a specific complex, separating out from it, and for the first time diagnosing, the specimens from Montana as *Dermacentor andersoni* [*D. andersoni* Stiles 1905, *nomen nudum*]. Incidentally he also mentioned *D. venustus* as an allied species from Texas, but gave no characters and mentioned no type.

Up to that time there had been no published mention of type specimen or of the names having been tied down to any particular specimens, except in the case of *D. occidentalis*.

No further revision and subdivision of the complex took place until August, 1910, when Stiles' paper entitled "the taxonomic value of the microscopic structure of the stigmal plates in the tick genus *Dermacentor*" was published (Hyg. Lab. U. S. Publ. Health Mar. Hosp. Serv.). In this he undertook a final revision of the specific complex *D. reticulatus* as presented by Neumann in 1897. In this revision he described fully and figured *D. venustus* designating "Marx 122 in U. S. National Museum. Host, Sheep (*Ovis aries*) in Texas" as the type (holotype). As *the* final reviser of a complex group embracing specimens from a large number of localities, some of which had been variously named, he exercised *his* right to select the type for such components as had not already been so designated.

The case of *Dermacentor andersoni* seems to be simpler still.

Specimens of this form do not appear to have been known by Neumann in 1897, at least he does not mention Montana specimens as being among the material examined by him, and *D. andersoni* is consequently not involved in the revision of Neumann's *D. reticulatus* (of 1897). The name appears before 1908 only as a *nomen nudum* and consequently does not concern us until that year when it is briefly characterized by Stiles (Weekly Publ. Health Rep., vol. 23, pt. 2, Nos. 27 to 52, July 3, 1908m, p. 949) and said to be based on specimens from Montana. Specimens from the latter State were first mentioned by Banks in June, 1908, and by him included in his complex *D. venustus*. In 1910, a definite type specimen of *D. andersoni* was published by Stiles, *viz.*, U. S. P. H. & M. H. S. 9467. This specimen is from Woodman, Montana; host, *Equus caballus*.

The subsequent discussion between Banks and Stiles as to what specimens in the museums were actually designated as types of *D. venustus,* but which had never been so designated in any publication, seems to me irrelevant.

The published record of the two forms and their gradual fixation nomenclatorially by the various revisers may be briefly summarized as follows:

D. VENUSTUS

1897. Component of the complex *D. reticulatus* Neumann (no type designation).
1908. Component of the complex *D. venustus* Banks (no type designation).
1910. Segregated from *D. venustus* Banks 1908 and type designated by Stiles: Marx No. 122.

D. ANDERSONI

1908. June. Montana specimens (not named) included in the complex *D. venustus* Banks (no type designation).
1910. August. Type designated by Stiles.

I am, therefore, of the opinion that the answer to Dr. W. Dwight Pierce's communication should be:

1. That the Commission as such is incompetent to express an Opinion as to the name of the spotted fever tick. It can only take cognizance of the systematic names which have been applied to the various forms mentioned by him, and decide as to their applicability under the Code as disclosed by the records before the Commission.

2. On basis of these records it appears that, assuming the taxonomic distinctness of these forms,

a. The name *Dermacentor venustus* Marx in Neumann 1897 belongs to a form with the specimen Marx No. 122, from Texas as holotype.

b. The name *Dermacentor andersoni* Stiles 1908 belongs to a form with specimen U. S. P. H. & M. H.S. 9467, from Woodman, Montana, as the holotype.

Opinion written by Stejneger.

Opinion concurred in by 11 Commissioners: Allen, Apstein, Bather, Loennberg, Handlirsch, Hoyle, D. S. Jordan, K. Jordan, Monticelli, Skinner, and Stejneger.

Opinion dissented from by two Commissioners: Horváth and Kolbe.

Horváth states: "Je n'accepte que la seconde partie de la proposition, celle qui se rapporte au nom de *Dermacentor andersoni* Stiles, 1908. En ce qui concerne la première partie de la proposition, l'auteur de *Dermacentor venustus* est, à mon avis, incontestablement Banks qui en a publié en 1908 la première description. *D. venustus* Marx in

Neumann 1897 est un *nomen nudum,* puisque ni Marx, ni Neumann n'en ont donné une description. Le principe statué par l'Opinion 4 et appliqué dans l'Opinion 53 est inadmissible et doit être rejeté comme tout-à-fait contraire aux lois fondamentales de la nomenclature zoologique."

Monticelli states: "I cannot agree with the *first* point of the opinion of Stejneger from which, according to my judgment, a contradiction results.

"As the Commission must, on the basis of the conclusions of the relator, determine the nomenclature of the two species of *Dermacentor* (as results from the *second* point of the same conclusions by the wide discussion of the case presented for the examination of the Commission), I think that the Commission cannot declare its incompetence to express an opinion on Dr. Pierce's question. I think, therefore, that the Commission could well give its opinion on the specific name of the species of *Dermacentor* which transmits 'spotted fever' to man.

"Because, having fixed the two specific names, *Dermacentor venustus* Marx, 1897, and *Dermacentor andersoni* Stiles, 1908, and having identified with these names all the other names that different authors have attributed to the ticks of 'spotted fever,' it seems to me that—from the elimination of the names by which the relator has arrived at the *second* point of his conclusions—the specific name of the *Dermacentor* that gives spotted fever logically should result.

"It only remains to identify which of the two species of *Dermacentor* is the intermediate host of the parasite of 'spotted fever.'

"2. I agree, however, to the second point of the conclusions of the relator."

Not voting, two Commissioners: Hartert, Stiles.