

The Project Gutenberg eBook of A New Subspecies of *Microtus montanus* from Montana and Comments on *Microtus canicaudus* Miller, by E. Raymond Hall and Keith R. Kelson

This ebook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this ebook or online at www.gutenberg.org. If you are not located in the United States, you'll have to check the laws of the country where you are located before using this eBook.

Title: A New Subspecies of *Microtus montanus* from Montana and Comments on *Microtus canicaudus* Miller

Author: E. Raymond Hall

Author: Keith R. Kelson

Release Date: May 18, 2009 [EBook #28864]

Language: English

Credits: Produced by Chris Curnow, Joseph Cooper, Greg Bergquist and the Online Distributed Proofreading Team at <https://www.pgdp.net>

*** START OF THE PROJECT GUTENBERG EBOOK A NEW SUBSPECIES OF MICROTUS MONTANUS FROM MONTANA AND COMMENTS ON MICROTUS CANICAUDUS MILLER ***

A New Subspecies of *Microtus montanus*
from
Montana and Comments on *Microtus canicaudus* Miller

[Pg 73]

BY

E. RAYMOND HALL and KEITH R. KELSON

University of Kansas Publications
Museum of Natural History
Volume 5, No. 7, pp. 73-79
October 1, 1951

University of Kansas
LAWRENCE
1951

UNIVERSITY OF KANSAS PUBLICATIONS, MUSEUM OF NATURAL HISTORY

[Pg 74]

Editors: E. Raymond Hall, Chairman, A. Byron Leonard,
Edward H. Taylor, Robert W. Wilson

Volume 5, No. 7, pp. 73-79
October 1, 1951

UNIVERSITY OF KANSAS
Lawrence, Kansas

PRINTED BY

A New Subspecies of *Microtus montanus* from Montana and Comments on *Microtus* *canicaudus* Miller

[Pg 75]

BY

E. RAYMOND HALL AND KEITH R. KELSON

IN 1949, for the Museum of Natural History of the University of Kansas, Mr. John A. White collected two specimens of the species *Microtus montanus* in the Bitterroot Valley of Montana, that did not fit the description of any named subspecies. These were laid aside until we could examine the additional specimens from Montana in the Biological Surveys collection in the United States National Museum, some of which previously had been reported by Bailey (N. Amer. Fauna, 17:31, June 6, 1900) under the name *Microtus nanus canescens* Bailey [= *Microtus montanus canescens*]. Our examination reveals that the animals from the Bitterroot and Flathead valleys belong to an heretofore unrecognized subspecies which is named and described below.

Microtus montanus pratincolus new subspecies

Type.—Female, adult, skull and skin, No. 34004, Univ. Kansas, Mus. Nat. Hist.; from 6 mi. E Hamilton, 3700 ft., Ravalli County, Montana; obtained on August 14, 1949, by John A. White; original number 477.

Geographic distribution.—Flathead and Bitterroot valleys of western Montana.

Diagnosis.—Size small for the species (see measurements). Color: Essentially as in *Microtus montanus nanus*. Skull: Small, slender, and comparatively smooth; rostrum moderately depressed distally; nasals moderately inflated distally and extending posteriorly not quite to tips of premaxillary tongues; nasals usually truncate posteriorly, but rounded in some individuals; premaxillary tongues terminating posteriorly in a short medial spine; zygomatic arches lightly constructed and usually more widely spreading posteriorly than anteriorly; interparietal comparatively long and terminating in a small, but distinct, medial spine, otherwise approximately rectangular in shape; exposed parts of upper incisors short and, for the species, only slightly procumbent; molar dentition weak and, in most specimens, especially so posteriorly; tympanic bullae large and well inflated, especially ventrolaterally; basioccipital narrow owing to the encroachment of the tympanic bullae.

Comparison.—Among named forms, *Microtus montanus pratincolus* most closely resembles *Microtus montanus nanus*. The geographic range of *M. m. nanus* adjoins that of *M. m. pratincolus* on three sides; there is no conspecific subspecies adjoining the range of *M. m. pratincolus* on the north. From *M. m. nanus*, *M. m. pratincolus* differs as follows (measurements are all of males, those of *M. m. nanus* being of nine topotypes and near topotypes from central Idaho): size smaller (149 mm. as opposed to 165), tail shorter (37 as opposed to 39), hind foot shorter (19 as opposed to 20), upper molar series shorter (expressed as a percentage of basilar length, 25.5 as opposed to 26.3), mastoidal region broader (expressed as a percentage of basilar length, 48.6 as opposed to 46.7), braincase slightly more vaulted (depth of braincase expressed as a percentage of basilar length, 31.3 as opposed to 30.4) and more inflated laterally; tympanic bullae more inflated, this inflation being the most conspicuous difference between the two subspecies. The tympanic bullae of *M. m. pratincolus* have approximately a fourth more volume than those of *M. m. nanus*.

[Pg 76]

Remarks.—Northwardly in the Bitterroot Valley, specimens of *M. m. pratincolus* morphologically approach *M. m. nanus*, especially in the reduced degree of inflation of the tympanic portion of the bullae. On geographic grounds we think that the geographic range of *M. m. pratincolus* extends southward to the southern end of the Bitterroot Valley; we have not seen specimens from that area. Although we have not examined the specimen reported upon by Davis (Murrelet, 18:26, September 4, 1937) from Canyon Creek, "a few miles west of Hamilton", Montana, we think that it will be found to belong to *M. m. pratincolus*.

Our examination of specimens from localities in Montana east of the range here ascribed to *M. m. pratincolus* indicates that, among named kinds of *Microtus*, those specimens are best referred to *M. m. nanus*. These specimens are listed below under comparative materials. It should be mentioned here that although Bailey (*loc. cit.*) applied the name *Microtus nanus canescens* to Montanan specimens from Flathead Lake and Hot Springs Creek, the subspecies *M. montanus canescens* now is thought to be restricted to Washington and the adjoining part of British Columbia; *M. m. canescens* does not occur so far east as Montana.

Grateful acknowledgment is made to those persons in charge of the Biological Surveys collection for permission to study the specimens in that collection, and to the Kansas Endowment Association for support of the field work which yielded the specimens from six miles east of Hamilton, Montana. The study here reported upon was aided also by a contract between the Office of Naval Research, Department of the Navy, and the University of Kansas (NR 161-791).

Measurements.—The following measurements in millimeters are those of the holotype and the average, maximum, and minimum, respectively, of eleven adult males from various places in the range of the subspecies. Except as noted below, we are unable to detect significant morphological differences in the populations sampled and believe that pooling of the measurements is justifiable in this case. Measurements are: Total length, 129, 149 (156-141); length of tail-vertebrae, 27, 37 (39-31); length of hind foot, 18, 19 (20-18) (all preceding measurements are those of the collectors); basilar length, 22.2, 24.5 (25.7-23.4); greatest length of nasals, 6.7, 6.9 (7.4-6.4); zygomatic breadth, 14.2, 14.6 (14.9-13.9); mastoidal breadth, 11.3, 11.8 (12.3-10.8); alveolar length of upper molar series, 6.0, 6.2 (6.5-5.9); depth of braincase (shortest distance from ventral surface of basioccipito-basisphenoidal suture to the dorsal surface of the cranium, and not perpendicular to the long axis of the skull), 7.7, 7.7 (7.9-7.5); width of rostrum, 4.7, 4.8 (5.0-4.6); interorbital breadth, 3.2, 3.4 (3.6-3.2). Measurements of females, other than those of the holotype, are not given owing to the lack of sufficient material. Females, however, do not appear to differ appreciably in measurements from males.

Specimens examined (in U.S. Nat. Mus., Biol. Surv. Coll., except as otherwise indicated).—Total, 26, all from Montana, as follows: *Sanders Co.*: Hot-springs Cr., 4. *Lake Co.*: end of Warm Flathead Lake, 5; Ravalli, 8. *Ravalli Co.*: Florence, 2; 8 mi. NE Stevensville, 4000 ft., 1; Corvallis, 4; 6 mi. E Hamilton, 3700 ft., 2(K.U.).

Comparative materials (in U.S. Nat. Mus., Biol. Surv. Coll.).—*Microtus montanus nanus*: Total, 72, as follows: IDAHO: *Lewis Co.*: Nez Perce, 3. *Idaho Co.*: Seven Devils Mts., 3550 ft., 3. *Custer Co.*: Challis, 7; Pahsimeroi Mts. (9300 ft., 8; 9700 ft., 4), 12. *Butte Co.*: Lost River Mts., 1. *Canyon Co.*: Nampa, 1; Bowmont, 1. *Ada Co.*: Boise, 1. *Blaine Co.*: Sawtooth Lake, 2; Alturas Lake, 3. *Owyhee Co.*: Three Cr., 3. *Minidoka Co.*: Heyburn, 2. *Bannock Co.*: Pocatello, 4. *Bear Lake Co.*: Montpelier Cr., 3. MONTANA: *Fergus Co.*: Big Snowy Mts., 11. *Gallatin Co.*: West Fork of West Fork, Gallatin River, 1. *Park Co.*: Lamar River, 7000 ft., 2; Gardiner, 1. *Sweetgrass Co.*: "near" head Big Timber Cr., Crazy Mts., 1; Big Timber Cr., 5200 ft., Crazy Mts., 1; 14 mi. S Big Timber, 1; West Boulder Cr., 18 mi. SE Livingston, 2; McLeod, 1. *Carbon Co.*: Beartooth Mts., 2; Beartooth Lake, 1. WYOMING: *Park Co.*: N end Lake, Yellowstone Nat'l Park, 2.

***Microtus montanus canicaudus* Miller**

1897. *Microtus canicaudus* Miller, Proc. Biol. Soc. Washington, 11:67, April 21, type from McCoy, Willamette Valley, Polk County, Oregon.

In 1938 when one of us (Hall, Proc. Biol. Soc. Washington, 51:131-134, August 23, 1938) arranged several nominal species of *Microtus* as subspecies of the species *Microtus montanus*, *Microtus canicaudus* was not included because that writer had not examined representative specimens. In the U.S. Biological Surveys collection in the U.S. National Museum we have examined specimens of *M. m. canicaudus*, all from Oregon, as follows: Hood River (Catalogue Nos. 262583-262586); Canby (262577, 262578); Wapinitia (79985-79988); Sheridan (69779, 69780); McCoy (75834-75842, 77744); Salem (246736); Albany (161554); and Corvallis (242552). The four specimens from Wapinitia seem to be those that Bailey (N. Amer. Fauna, 17:29, June 6, 1900) listed as *Microtus montanus*. The diagnostic characters mentioned by Miller in the original description (Proc. Biol. Soc. Washington, 11:67, April 21, 1897) included the following: size approximately the same as in *Microtus [montanus] nanus*; upper parts yellowish; tail usually nearly uniform grayish above and below; auditory bullae much inflated; lateral pits at posterior edge of bony palate unusually shallow. Because the tails of the original series were understuffed and variously rotated, they seemed to be less sharply bicolored than is the case, as shown by subsequently collected specimens. Otherwise we find that the characters mentioned above differentiate *canicaudus* from its nearest relatives, *Microtus montanus canescens* to the northward, *M. m. nanus* to the eastward, and *M. m. montanus* to the southward. In *canicaudus* we have noted one additional differential character; the interpterygoid space is acuminate anteriorly. In this feature and in each of the other features mentioned above, intergradation with *Microtus montanus nanus* is seen in the specimens from Hood River and Wapinitia. In the specimens from Hood River the auditory bullae are only slightly less inflated than in those topotypes of *canicaudus* having the smallest bullae; there is appreciable variation in size of the bullae in the topotypes. Even so, the minimum size of bullae among the topotypes is larger than the maximum size in the specimens from Wapinitia. The four specimens from Wapinitia have the yellowish color of *canicaudus* to a considerable degree, and show intergradation between *canicaudus* and *nanus* in depth of the palatal pits and shape of interpterygoid space. The slightly larger size of these specimens from Wapinitia suggests intergradation with *M. m. montanus*. The tympanic bullae in the specimens from Wapinitia seem to be smaller than in specimens of *canicaudus*, *nanus*, or *montanus*.

Because of the intergradation described above between *Microtus montanus nanus* and *M. canicaudus*, the latter should stand as *Microtus montanus canicaudus*.

Bailey (N. Amer. Fauna, 55:206, August 29, 1936) recorded *canicaudus* from Warm Springs in the Deschutes Valley of Oregon and from the state of Washington. Other authors also have recorded *canicaudus* from the state of Washington. Our examination of specimens leads us to conclude, as did Dalquest (Univ. Kansas Publ., Mus. Nat. Hist., 2:348, 349, April 9, 1948), that *canicaudus* does not occur in Washington. The reported occurrence of *M. canicaudus* at Warm Springs, Deschutes Valley, Oregon, seems to be the result of an error in identification. The specimens concerned seem to be two *Microtus longicaudus mordax* (Nos. 207060 and 207082 U.S.N.M.). They are labeled as collected at "Warm Springs (Mill Cr.—20 Mi. W of)". Bailey's (*op. cit.*, fig. 46, p. 209) map showing the distribution in Oregon of *Microtus mordax mordax* [= *Microtus longicaudus mordax*] has a locality-dot at Warm Springs itself. Bailey seems to have erred; he should have placed this dot 20 miles farther west, we think. When preparing his map (*op. cit.*, fig. 43, p. 205) showing the geographic distribution of *Microtus canicaudus*, Bailey seems to have misidentified these same two specimens as *M. canicaudus*, and for them placed a locality-dot on his map 20 miles east (instead of west) of Warm Springs. In brief, Bailey probably did not see any specimens of *canicaudus* or specimens of any other subspecies of *Microtus montanus* from Warm Springs.

Transmitted February 15, 1951.

23-7438

*** END OF THE PROJECT GUTENBERG EBOOK A NEW SUBSPECIES OF MICROTUS MONTANUS FROM MONTANA AND COMMENTS ON MICROTUS CANICAUDUS MILLER ***

Updated editions will replace the previous one—the old editions will be renamed.

Creating the works from print editions not protected by U.S. copyright law means that no one owns a United States copyright in these works, so the Foundation (and you!) can copy and distribute it in the United States without permission and without paying copyright royalties. Special rules, set forth in the General Terms of Use part of this license, apply to copying and distributing Project Gutenberg™ electronic works to protect the PROJECT GUTENBERG™ concept and trademark. Project Gutenberg is a registered trademark, and may not be used if you charge for an eBook, except by following the terms of the trademark license, including paying royalties for use of the Project Gutenberg trademark. If you do not charge anything for copies of this eBook, complying with the trademark license is very easy. You may use this eBook for nearly any purpose such as creation of derivative works, reports, performances and research. Project Gutenberg eBooks may be modified and printed and given away—you may do practically ANYTHING in the United States with eBooks not protected by U.S. copyright law. Redistribution is subject to the trademark license, especially commercial redistribution.

START: FULL LICENSE

THE FULL PROJECT GUTENBERG LICENSE

PLEASE READ THIS BEFORE YOU DISTRIBUTE OR USE THIS WORK

To protect the Project Gutenberg™ mission of promoting the free distribution of electronic works, by using or distributing this work (or any other work associated in any way with the phrase "Project Gutenberg"), you agree to comply with all the terms of the Full Project Gutenberg™ License available with this file or online at www.gutenberg.org/license.

Section 1. General Terms of Use and Redistributing Project Gutenberg™ electronic works

1.A. By reading or using any part of this Project Gutenberg™ electronic work, you indicate that you have read, understand, agree to and accept all the terms of this license and intellectual property (trademark/copyright) agreement. If you do not agree to abide by all the terms of this agreement, you must cease using and return or destroy all copies of Project Gutenberg™ electronic works in your possession. If you paid a fee for obtaining a copy of or access to a Project Gutenberg™ electronic work and you do not agree to be bound by the terms of this agreement, you may obtain a refund from the person or entity to whom you paid the fee as set forth in paragraph 1.E.8.

1.B. "Project Gutenberg" is a registered trademark. It may only be used on or associated in any way with an electronic work by people who agree to be bound by the terms of this agreement. There are a few things that you can do with most Project Gutenberg™ electronic works even without complying with the full terms of this agreement. See paragraph 1.C below. There are a lot of things you can do with Project Gutenberg™ electronic works if you follow the terms of this agreement and help preserve free future access to Project Gutenberg™ electronic works. See paragraph 1.E below.

1.C. The Project Gutenberg Literary Archive Foundation ("the Foundation" or PGLAF), owns a compilation copyright in the collection of Project Gutenberg™ electronic works. Nearly all the

individual works in the collection are in the public domain in the United States. If an individual work is unprotected by copyright law in the United States and you are located in the United States, we do not claim a right to prevent you from copying, distributing, performing, displaying or creating derivative works based on the work as long as all references to Project Gutenberg are removed. Of course, we hope that you will support the Project Gutenberg™ mission of promoting free access to electronic works by freely sharing Project Gutenberg™ works in compliance with the terms of this agreement for keeping the Project Gutenberg™ name associated with the work. You can easily comply with the terms of this agreement by keeping this work in the same format with its attached full Project Gutenberg™ License when you share it without charge with others.

1.D. The copyright laws of the place where you are located also govern what you can do with this work. Copyright laws in most countries are in a constant state of change. If you are outside the United States, check the laws of your country in addition to the terms of this agreement before downloading, copying, displaying, performing, distributing or creating derivative works based on this work or any other Project Gutenberg™ work. The Foundation makes no representations concerning the copyright status of any work in any country other than the United States.

1.E. Unless you have removed all references to Project Gutenberg:

1.E.1. The following sentence, with active links to, or other immediate access to, the full Project Gutenberg™ License must appear prominently whenever any copy of a Project Gutenberg™ work (any work on which the phrase “Project Gutenberg” appears, or with which the phrase “Project Gutenberg” is associated) is accessed, displayed, performed, viewed, copied or distributed:

This eBook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this eBook or online at www.gutenberg.org. If you are not located in the United States, you will have to check the laws of the country where you are located before using this eBook.

1.E.2. If an individual Project Gutenberg™ electronic work is derived from texts not protected by U.S. copyright law (does not contain a notice indicating that it is posted with permission of the copyright holder), the work can be copied and distributed to anyone in the United States without paying any fees or charges. If you are redistributing or providing access to a work with the phrase “Project Gutenberg” associated with or appearing on the work, you must comply either with the requirements of paragraphs 1.E.1 through 1.E.7 or obtain permission for the use of the work and the Project Gutenberg™ trademark as set forth in paragraphs 1.E.8 or 1.E.9.

1.E.3. If an individual Project Gutenberg™ electronic work is posted with the permission of the copyright holder, your use and distribution must comply with both paragraphs 1.E.1 through 1.E.7 and any additional terms imposed by the copyright holder. Additional terms will be linked to the Project Gutenberg™ License for all works posted with the permission of the copyright holder found at the beginning of this work.

1.E.4. Do not unlink or detach or remove the full Project Gutenberg™ License terms from this work, or any files containing a part of this work or any other work associated with Project Gutenberg™.

1.E.5. Do not copy, display, perform, distribute or redistribute this electronic work, or any part of this electronic work, without prominently displaying the sentence set forth in paragraph 1.E.1 with active links or immediate access to the full terms of the Project Gutenberg™ License.

1.E.6. You may convert to and distribute this work in any binary, compressed, marked up, nonproprietary or proprietary form, including any word processing or hypertext form. However, if you provide access to or distribute copies of a Project Gutenberg™ work in a format other than “Plain Vanilla ASCII” or other format used in the official version posted on the official Project Gutenberg™ website (www.gutenberg.org), you must, at no additional cost, fee or expense to the user, provide a copy, a means of exporting a copy, or a means of obtaining a copy upon request, of the work in its original “Plain Vanilla ASCII” or other form. Any alternate format must include the full Project Gutenberg™ License as specified in paragraph 1.E.1.

1.E.7. Do not charge a fee for access to, viewing, displaying, performing, copying or distributing any Project Gutenberg™ works unless you comply with paragraph 1.E.8 or 1.E.9.

1.E.8. You may charge a reasonable fee for copies of or providing access to or distributing Project Gutenberg™ electronic works provided that:

- You pay a royalty fee of 20% of the gross profits you derive from the use of Project Gutenberg™ works calculated using the method you already use to calculate your applicable taxes. The fee is owed to the owner of the Project Gutenberg™ trademark, but he has agreed to donate royalties under this paragraph to the Project Gutenberg Literary Archive Foundation. Royalty payments must be paid within 60 days following each date on which you prepare (or are legally required to prepare) your periodic tax returns. Royalty payments should be clearly marked as such and sent to the Project Gutenberg Literary Archive Foundation at the address specified in Section 4, “Information about donations to the Project Gutenberg Literary Archive Foundation.”

- You provide a full refund of any money paid by a user who notifies you in writing (or by e-mail) within 30 days of receipt that s/he does not agree to the terms of the full Project Gutenberg™ License. You must require such a user to return or destroy all copies of the works possessed in a physical medium and discontinue all use of and all access to other copies of Project Gutenberg™ works.
- You provide, in accordance with paragraph 1.F.3, a full refund of any money paid for a work or a replacement copy, if a defect in the electronic work is discovered and reported to you within 90 days of receipt of the work.
- You comply with all other terms of this agreement for free distribution of Project Gutenberg™ works.

1.E.9. If you wish to charge a fee or distribute a Project Gutenberg™ electronic work or group of works on different terms than are set forth in this agreement, you must obtain permission in writing from the Project Gutenberg Literary Archive Foundation, the manager of the Project Gutenberg™ trademark. Contact the Foundation as set forth in Section 3 below.

1.F.

1.F.1. Project Gutenberg volunteers and employees expend considerable effort to identify, do copyright research on, transcribe and proofread works not protected by U.S. copyright law in creating the Project Gutenberg™ collection. Despite these efforts, Project Gutenberg™ electronic works, and the medium on which they may be stored, may contain “Defects,” such as, but not limited to, incomplete, inaccurate or corrupt data, transcription errors, a copyright or other intellectual property infringement, a defective or damaged disk or other medium, a computer virus, or computer codes that damage or cannot be read by your equipment.

1.F.2. LIMITED WARRANTY, DISCLAIMER OF DAMAGES - Except for the “Right of Replacement or Refund” described in paragraph 1.F.3, the Project Gutenberg Literary Archive Foundation, the owner of the Project Gutenberg™ trademark, and any other party distributing a Project Gutenberg™ electronic work under this agreement, disclaim all liability to you for damages, costs and expenses, including legal fees. YOU AGREE THAT YOU HAVE NO REMEDIES FOR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTY OR BREACH OF CONTRACT EXCEPT THOSE PROVIDED IN PARAGRAPH 1.F.3. YOU AGREE THAT THE FOUNDATION, THE TRADEMARK OWNER, AND ANY DISTRIBUTOR UNDER THIS AGREEMENT WILL NOT BE LIABLE TO YOU FOR ACTUAL, DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE OR INCIDENTAL DAMAGES EVEN IF YOU GIVE NOTICE OF THE POSSIBILITY OF SUCH DAMAGE.

1.F.3. LIMITED RIGHT OF REPLACEMENT OR REFUND - If you discover a defect in this electronic work within 90 days of receiving it, you can receive a refund of the money (if any) you paid for it by sending a written explanation to the person you received the work from. If you received the work on a physical medium, you must return the medium with your written explanation. The person or entity that provided you with the defective work may elect to provide a replacement copy in lieu of a refund. If you received the work electronically, the person or entity providing it to you may choose to give you a second opportunity to receive the work electronically in lieu of a refund. If the second copy is also defective, you may demand a refund in writing without further opportunities to fix the problem.

1.F.4. Except for the limited right of replacement or refund set forth in paragraph 1.F.3, this work is provided to you ‘AS-IS’, WITH NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.

1.F.5. Some states do not allow disclaimers of certain implied warranties or the exclusion or limitation of certain types of damages. If any disclaimer or limitation set forth in this agreement violates the law of the state applicable to this agreement, the agreement shall be interpreted to make the maximum disclaimer or limitation permitted by the applicable state law. The invalidity or unenforceability of any provision of this agreement shall not void the remaining provisions.

1.F.6. INDEMNITY - You agree to indemnify and hold the Foundation, the trademark owner, any agent or employee of the Foundation, anyone providing copies of Project Gutenberg™ electronic works in accordance with this agreement, and any volunteers associated with the production, promotion and distribution of Project Gutenberg™ electronic works, harmless from all liability, costs and expenses, including legal fees, that arise directly or indirectly from any of the following which you do or cause to occur: (a) distribution of this or any Project Gutenberg™ work, (b) alteration, modification, or additions or deletions to any Project Gutenberg™ work, and (c) any Defect you cause.

Section 2. Information about the Mission of Project Gutenberg™

Project Gutenberg™ is synonymous with the free distribution of electronic works in formats readable by the widest variety of computers including obsolete, old, middle-aged and new computers. It exists because of the efforts of hundreds of volunteers and donations from people in all walks of life.

Volunteers and financial support to provide volunteers with the assistance they need are critical

to reaching Project Gutenberg™'s goals and ensuring that the Project Gutenberg™ collection will remain freely available for generations to come. In 2001, the Project Gutenberg Literary Archive Foundation was created to provide a secure and permanent future for Project Gutenberg™ and future generations. To learn more about the Project Gutenberg Literary Archive Foundation and how your efforts and donations can help, see Sections 3 and 4 and the Foundation information page at www.gutenberg.org.

Section 3. Information about the Project Gutenberg Literary Archive Foundation

The Project Gutenberg Literary Archive Foundation is a non-profit 501(c)(3) educational corporation organized under the laws of the state of Mississippi and granted tax exempt status by the Internal Revenue Service. The Foundation's EIN or federal tax identification number is 64-6221541. Contributions to the Project Gutenberg Literary Archive Foundation are tax deductible to the full extent permitted by U.S. federal laws and your state's laws.

The Foundation's business office is located at 809 North 1500 West, Salt Lake City, UT 84116, (801) 596-1887. Email contact links and up to date contact information can be found at the Foundation's website and official page at www.gutenberg.org/contact

Section 4. Information about Donations to the Project Gutenberg Literary Archive Foundation

Project Gutenberg™ depends upon and cannot survive without widespread public support and donations to carry out its mission of increasing the number of public domain and licensed works that can be freely distributed in machine-readable form accessible by the widest array of equipment including outdated equipment. Many small donations (\$1 to \$5,000) are particularly important to maintaining tax exempt status with the IRS.

The Foundation is committed to complying with the laws regulating charities and charitable donations in all 50 states of the United States. Compliance requirements are not uniform and it takes a considerable effort, much paperwork and many fees to meet and keep up with these requirements. We do not solicit donations in locations where we have not received written confirmation of compliance. To SEND DONATIONS or determine the status of compliance for any particular state visit www.gutenberg.org/donate.

While we cannot and do not solicit contributions from states where we have not met the solicitation requirements, we know of no prohibition against accepting unsolicited donations from donors in such states who approach us with offers to donate.

International donations are gratefully accepted, but we cannot make any statements concerning tax treatment of donations received from outside the United States. U.S. laws alone swamp our small staff.

Please check the Project Gutenberg web pages for current donation methods and addresses. Donations are accepted in a number of other ways including checks, online payments and credit card donations. To donate, please visit: www.gutenberg.org/donate

Section 5. General Information About Project Gutenberg™ electronic works

Professor Michael S. Hart was the originator of the Project Gutenberg™ concept of a library of electronic works that could be freely shared with anyone. For forty years, he produced and distributed Project Gutenberg™ eBooks with only a loose network of volunteer support.

Project Gutenberg™ eBooks are often created from several printed editions, all of which are confirmed as not protected by copyright in the U.S. unless a copyright notice is included. Thus, we do not necessarily keep eBooks in compliance with any particular paper edition.

Most people start at our website which has the main PG search facility: www.gutenberg.org.

This website includes information about Project Gutenberg™, including how to make donations to the Project Gutenberg Literary Archive Foundation, how to help produce our new eBooks, and how to subscribe to our email newsletter to hear about new eBooks.