

IDENTIFICATION OF THE NOVA ALBION CONIE

A Research Report of the Drake Navigators Guild

by

Robert W. Allen and Robert W. Parkinson

Copyright by

Drake Navigators Guild
Point Reyes
California

1971



Oscar Heuter

"we saw...a strange kind of Conies"

---(The World Encompassed)

FOREWORD AND ACKNOWLEDGEMENTS

The accounts of Francis Drake's discoveries on the Pacific Coast of North America in 1579 present many interesting subjects for study; foremost of these is defining the precise location of his landing place and encampment on the coast of California. The Drake Navigators Guild has been concerned with all aspects of his visit and continues to study the details of this important voyage. In the accounts are found some of the earliest descriptions of California flora and fauna. This paper treats of one of these subjects: the identification of an unknown animal, so strange to the members of the expedition that it was discussed at length in the major accounts of the voyage.

The authors express their great appreciation to the many persons who have assisted directly and indirectly with the preparation of this paper: Matthew P. Dillingham, Past President, Raymond Aker, President, Edward P. Von der Porten, A.A. Cumming, and other members of Drake Navigators Guild for their continuing teamwork in field and documentary research on many aspects of the voyage of Francis Drake, and Daniel Dillon for editorial assistance. Dr. Robert T. Orr, Curator of Birds and Mammals, California Academy of Sciences, for reviewing the manuscript and making helpful suggestions. Mr. Oscar Heuter, Aptos, California, for frontispiece photograph of Botta Pocket

Gopher. The staffs of the libraries of the University of California, at Davis, and the Biology Library, Rare Book Room, and Bancroft Library, at Berkeley; the California Academy of Sciences, San Francisco; and the San Francisco Theological Seminary, San Anselmo.

Table of Contents

	Page
INTRODUCTION	1
ORIGINAL DESCRIPTIONS	3
IDENTIFICATION CRITERIA	8
Basic Description	15
Population	15
Head Detail	16
Body	17
Feet	17
Tail	18
Chin Pocket	19
Ranging for Food	20
Palatability	20
Use of Skin	21
IDENTIFICATION	
The Environment	22
Small Mammals of the Area	23
CONCLUSION	31
APPENDIX I	
Extract from James Burney, "A Chronological History of the Discoveries in the South Sea or Pacific Ocean."	32
APPENDIX II	
The Biblical Conie	34
The King James Version	36
16th Century English Bibles	38
Latin Vulgate, 1532	42
Latin Vulgate, 1959	43
Wycliffe Bible References	44
References in the Wycliffe (Purvey) Bible	45
BIBLIOGRAPHY	46

IDENTIFICATION OF THE NOVA ALBION CONIE

I. INTRODUCTION

It is recorded in accounts of Francis Drake's encampment on the California Coast in June and July 1579 that the expedition observed a small animal of an unfamiliar type: "a strange kind of Conies." The identity of this animal has been the subject of much speculation by Drake scholars, for here is a possible indication of the general location of Drake's encampment. When the Drake Navigators Guild correlated these references in the voyage accounts with its established location on Drake's encampment,¹ a positive identification of this animal was made.

Previous researchers did not have the area of the encampment clearly established for use as a base from which to study the subject of the "Conie" and advanced the conflicting hypotheses that the Drake "Conie" was either a

1. Formal announcement of the identification of this site as the cove on the west side of Drakes Estero at Drakes Bay was announced before the California Historical Society on June 14, 1956, by Fleet Admiral Chester W. Nimitz, Honorary Chairman of the Drake Navigators Guild. For detailed information concerning the establishment of the location see Raymond Aker, M.P. Dillingham and Robert Parkinson, Nova Albion Rediscovered. See also Chester W. Nimitz, "Drake's Cove -- A Navigational Approach to Identification," Pacific Discovery, XI, (March-April, 1958); Edward Von der Porten, "Our First New England," U.S. Naval Institute Proceedings, LXXXVI (December, 1960); and Captain Adolph S. Oko, "Francis Drake and Nova Albion," California Historical Society Quarterly, XLIII (June, 1964).

ground squirrel or a pocket gopher.¹ This report identifies the animal in question as the Botta Pocket Gopher (Thomomys bottae bottae).

The Elizabethan "Conie" will be used throughout instead of the modern spellings cony or coney.

1. See J.D.B. Stillman, "Did Drake Discover San Francisco Bay?", Overland Monthly, I, (October 1868), pp. 334-335; J.D.B. Stillman, Seeking the Golden Fleece, pp. 295-297; John T. Doyle, Introduction to Rev. Padre Fr. Francisco Palou, Noticias de la Nueva California, I, x; Hubert H. Bancroft, History of California, I, pp. 93-94; George Davidson, Identification of Sir Francis Drake's Anchorage on the Coast of California in the Year 1579, p. 15; George Davidson, Francis Drake on the Northwest Coast of America, p. 95; Henry R. Wagner, Sir Francis Drake's Voyage Around the World, pp. 146, 492-493.

II. ORIGINAL DESCRIPTIONS

The four accounts referring to the Conie are quoted and briefly discussed before proceeding to a more comprehensive study.

1. "The famous voyage of Sir Francis Drake into the South Sea, and there hence about the whole Globe of the Earth, begun in the yeare of our Lord 1577," by Richard Hakluyt, in his The Principall Navigations, Voiages and Discoveries of the English Nation, London, 1589.¹

The text used is the photolithographic reprint of the 1589 edition published in 1965 as Hakluyt Society Extra Series No. XXXIX in two volumes. This account appears in volume 2.

Next vnto him which bare the scepter, was the King himselfe, with his Garde about his person, clad with Conie skins, & other skins: after them followed the naked common sort of people,

Our necessarie busines being ended, our Generall with his companie traualled vp into the Countrey to their villages, where wee found heardes of Deere by 1000. in a companie, being most large, and fat of bodie.

We found the whole Countrey to be a warren of a strange kind of Connies, their bodies in bignes as be Barbarie Connies, their heads as the heads of ours, the feete of a Want, and the taile of a Rat being of great length: vnder her chinne on either side a bagge, into the which she gathereth her meate, when she hath filled her bellie abroad. The people eate their bodies, and make great accompt of their skinner, for their Kings coate was made of them.

1. A second edition of his work appeared in 1600 with numerous revisions, but with no changes affecting the Conie references.

2. The World Encompassed by Sir Francis Drake, Being his next voyage to that to Nombre de Dios formerly imprinted; Carefully collected out of the notes of Master Francis Fletcher Preacher in this imployment, and diuers others his followeres in the same: Offered now at last to publique view, both for the honor of the actor, but especially for the stirring vp of heroick spirits, to benefit their Countrie, and eternize their names by like noble attempts. London, 1628.

The text of World Encompassed used in this study is the Argonaut Press edition, 1926, pages 57 and 62.

Next vnto him that bare this Scepter, was the king himselfe with his guard about him; ... vpon his shoulders he had on a coate of the skins of conies, reaching to his wast; his guard also had each coats of the same shape, but of other skins;

After that our necessary businesses were well dispatched, our Generall, with his gentlemen and many of his company, made a iourney vp into the land, to see the manner of their dwelling, and to be the better acquainted with the nature and commodities of the country The inland we found to be farre different from the shoare, a goodly country, and fruitfull soyle, stored with many blessings fit for the vse of man: infinite was the company of very large and fat Deere which there we sawe by thousands, as we supposed, in a heard; besides a multitude of a strange kind of Conies, by farre exceeding them in number: their heads and bodies, in which they resemble other Conies, are but small; his tayle, like the tayle of a Rat, exceeding long; and his feet like the pawes of a Want or moale; vnder his chinne, on either side, he hath a bagge, into which he gathereth his meate, when he hath filled his belly abroad, that he may with it, either feed his young, or feed himselfe when he lists not to trauaile from his burrough; the people eate their bodies, and make great account of their skinned, for their kings holidiaies coate was made of them.

In reference to the Conies, Famous Voyage and World Encompassed agree substantially in detail and sequence, often even to the precise wording and spelling. There has been some rewording and changing of gender, but both texts

show a common basis -- probably Chaplain Fletcher's notes. Hakluyt, wanting a concise account of the voyage, edited this basic account by deleting material and rewording it so as to sometimes miss the fine points of the original description. It would also appear that Hakluyt, writing within a decade of Drake's return, obtained additional information from members of Drake's crew, as well as clarification and confirmation of information contained in the basic account. World Encompassed is the more detailed account of the voyage edited by Sir Francis Drake, Bart., Drake's nephew, who had no reason to abbreviate the eyewitness accounts, for which he gives credit to Fletcher and others. Note that the words "Carefully collected" are incorporated in the title.

So much of the objective reporting in World Encompassed has been shown to agree with fact that one is justified in giving credence to information not yet fully verified.

3. Annales Rerum Anglicarum et Hibernicarum, regnante Elizabetha, ad annum Salvtilis M.D. LXXXIX

This work, in Latin, by William Camden was published in London in 1615. A French translation by Paul de Bellegent from the Latin was issued in London in 1624. From this French translation Abraham Darcie made the first English translation in 1625 under the title Annales, The True and Royall History of the famous Empress Elizabeth.

Wagner¹ points out that the Camden account drew largely on Hakluyt's original edition of Famous Voyage. The English text used here is that reprinted by Wagner. The Latin text is from the original edition of 1615.

Regionem hanc uberi gleba, damis & cuniculis²
refertissiman, NOVAM ALBION placuit nominare,

Drake named that very countrey, being fat
and good, full of Deeres and Conies, the New
Albion;

4. "Carta Particolare, No. XXXIII," by Robert Dudley,
in his Arcano del Mare, Vol. 3, Florence, 1647.

The text accompanying this map describes Nova Albion. The original Italian and the English translation appear in George Davidson, Identification of Sir Francis Drake's Anchorage on the Coast of California in the Year 1579, San Francisco, 1890.³ Dudley's account was published after both Famous Voyage and World Encompassed, apparently drawing on both of them.

Viddee de' Conigli⁴ in quantità grand, ma
con code lunghe come i topi,

They saw rabbits⁵ in great numbers, except
that the tail was long like that of the rat,

1. Henry R. Wagner, Sir Francis Drake's Voyage Around the World, p. 316.

2. See p. 14, below.

3. See p. 50 and pp. 12-13 respectively, op. cit.

4. See p. 14, below.

5. See p. 14, below.

The Camden and Dudley accounts only reinforce the first two accounts.

All Conie references found in the four accounts cited in this study are considered to be substantially reliable statements.

III. IDENTIFICATION CRITERIA

The following symbols designate the four contemporary accounts referring to the Conie;

- F.V. --- Famous Voyage
- W.E. --- World Encompassed
- A. --- Annales
- C.P. --- Carta Particolare

The contemporary descriptions are broken down into general subjects; these are further broken down into separate criteria which are discussed in detail.

General Criteria

Basic Description

- (F.V.) a strange kind of Connies
- (W.E.) a strange kind of Conies

Population

- (F.V.) We found the whole Countrey to be a warren
- (W.E.) infinite was the company of ... Deere which there we sawe by thousands, as we supposed, in a heard; besides a multitude of ... conies, by farre exceeding them in number.
- (A.) that very countrey ... full of Deeres and Conies
- (C.P.) Viddee de' Conigli in quantità grande

Head

- (F.V.) their heads as the heads of ours [Conies]
- (W.E.) their heads and bodies, in which they resemble other Conies, are but small

Body

(F.V.) their bodies in bignes as be the Barbarie
Connies

(W.E.) their heads and bodies, in which they re-
semble other Conies, are but small

Foot

(F.V.) the feete of a Want

(W.E.) and his feet like the pawes of a Want or moale

Tail

(F.V.) and the taile of a Rat being of great length

(W.E.) his tayle, like the tayle of a Rat, exceeding
long

(C.P.) ma con code lunghe come i topi

Chin-pocket

(F.V.) vnder her chinne on either side a bagge, into
the which she gathereth her meate

(W.E.) vnder his chinne, on either side, he hath a
bagge, into which he gathereth his meate

Food-ranging

(F.V.) when she hath filled her bellie abroad

(W.E.) when he hath filled his belly abroad, that he
may with it, either feed his young, or feed
himself when he lists not to trauaile from his
burrough

Palatability

(F.V.) the people eate their bodies

(W.E.) the people eate their bodies

Use of skin

- (F.V.) 1. the King himselfe, with his Garde about his
person, clad with Conie skins, & other skins
2. The people . . . make great accompt of their
skinneres, for their Kings coate was made of
them

- (W.E.) 1. vpon his shoulders he [the king] had on a coate of the skins of conies, reaching to his wast; his guard also had each coats of the same shape, but of other skins
2. the people . . . make great accompt of their skinnes, for their kings holidaiies coate was made of them

Both Famous Voyage and World Encompassed use the same basic description: "a strange kind of Conies." This implies the animal was like no Conie known to the expedition, yet Conie is the basic descriptive word.

The term conie (Connies, Conies) is used in several sentences in Famous Voyage and World Encompassed, but nearly always as a comparative. The Annales and the Carta Particolare texts do not use it in a comparative sense.

The references to the king's coat say skins of Conies in all instances. These references in all cases come before the description of the Conie itself and are the first mentioned. Later, at the end of the Conie description, both Famous Voyage and World Encompassed state in identical terms that the Conies' skins comprising the king's coat were of the type of Conie they just finished describing: the Nova Albion Conie. Both accounts describe in detail why these Nova Albion Conies were strange. In the Famous Voyage description of the Conie's head, the phrase, "as the heads of ours" is used. Being of English origin, this expression of familiarity refers one to the commonly recognized Conie of the British Isles: the common European wild rabbit (Corycto-

lagus cuniculus), or perhaps to one of its domesticated relatives.¹

Only Famous Voyage uses the term "Barbarie Connies", and that for comparison of size. This comparison raises three interesting questions. To what geographical area did Hakluyt refer? To what animal did he refer? How well known were the "Barbarie Connies"?

As used in numerous accounts in the Voyages, Barbary included not only the North African lands (excluding Egypt) bordering the Mediterranean, but also the Atlantic Coast of Northwest Africa. Famous Voyage² states that Drake made his first landfall at "Cape Cantine, on the coast of Barbarie",³ and two days later anchored at the Island of Mogador which lies one mile off the mainland. The next stop was made under the shelter of Cape Blanco.⁴ World Encompassed also uses "Cape Cantine in Barbarie".⁵ Chaplain Francis Fletcher's notes give additional details of their visit to Barbary including a crude map of the coast

1. T.C.S. Morrison-Scott, Mammal Room, British Museum of Natural History, letter of 20 January 1954 in Drake Navigators Guild files.

2. Richard Hakluyt, The Principall Navigations, Voiages and Discoveries of the English Nation, v.2, p. 643a.

3. In Morocco. The latitude of the lighthouse is 32° 32' N.

4. At the southern end of Spanish Sahara. The latitude of the lighthouse is 20° 46' 45" N.

5. N.M. Penzer, ed., The World Encompassed and Analogous Contemporary Documents, p. 3.

of "Barbaria". He states that Cape Verde is the headland which parts Barbary and Guinea.¹ The accounts of the voyage of Thomas Cavendish, in the 1600 edition of Hakluyt, include a list of latitudes on the coast of "Barbarie" as far as Sierra Leone, but subsequently refers to points south of Cape Blanco as on the coast of "Guiny".²

As a chronicler of voyages and travels, Hakluyt had access to first-hand information, and interviewed many persons connected with contemporary voyages, including probably more than one member of the Drake expedition. He had a wide geographical knowledge which reasonably included information concerning animals of Barbary. He makes no reference to Conies in his accounts of Barbary. His use of "Barbarie Connies" suggests that the term Conie was not restricted to a rabbit, but also applied to any rabbit-like animal, and this is supported by the use of the phrase in World Encompassed and Annales to describe the strange conie-like animal found in Nova Albion.³

Although the range of Oryctolagus cuniculus included Northwest Africa,⁴ it seems pointless to compare identical species in England and Barbary.

1. Op. cit. pp. 88-94

2. Richard Hakluyt, The Principal Navigations Voyages Traffiques & Discoveries of the English Nation, Dent edition 1927, pp. 255-259.

3. See also Edward Topsell, The History of Four-footed Beasts, Serpents, and Insects, (1658), Vol. I, pp. 88-89, for description of the guinea-pig, then called "Spanish Conie" or "Indian little Pig-Cony."

4. Ernest P. Walker et al., Mammals of the World, p. 662.

The possible identity of the "Barbarie Connies" is suggested by the use of the word conie in the 16th Century English translations of the Bible.¹ There are four such references in the Old Testament: Leviticus XI:5, Deuteronomy XIV:7, Psalms CIV (CIII):18, and Proverbs XXX:26. The Hebrew word shaphan was translated into the Latin Vulgate as chirogrillus, herinaciis, and lepusculus, with great variations in spelling. Wycliffe's late 14th Century English translation used vrchon and litle hare. Luther used the German word for rabbits, Köninchen. The 16th Century English translators, using the Vulgate, Hebrew, and other previous translations, chose the word conie. So little was known by scholars in Europe about the fauna of the Holy Land, that the meanings of the Hebrew words designating many of the animals were conjectural. Thus some translators identified the shaphan as described in the four references as hedge-hog, porcupine, or little hare; others as rabbit. Rabbits, however, did not live in the Holy Land.

The shaphan is now generally identified as the Syrian hyrax, Procavia syriacus, with some dispute as to whether the particular genus is Procavia or Heterohyrax.² Hyrax

1. See Appendix II.

2. See Maurice Burton, Systematic Dictionary of Mammals of the World, pp. 90-91; Frederick Drimmer, ed., The Animal Kingdom, Vol. I, p. 648; British Museum, Guide to the Great Game Animals, pp. 67-68; British Museum, Catalogue of the Ungulate Mammals in the British Museum, pp. 58-80; Walker, op. cit., pp. 1330-31. Dr. Walker makes the identification as Heterohyrax, whereas all other references examined have been Procavia.

are small animals, ranging in size from a young rabbit to a hare. They have been described as like a short-eared rabbit in size, appearance and habits. The Bible refers to the conies as little.

The range of the Syrian hyrax does not extend as far west as North Africa, but similar species do occur on the northwest coast of Africa, and in fact generally throughout the continent. The mariner and merchant traveller to Barbary must have known the hyrax, and the similarity of this "Barbarie Conie" to the rabbit and to the biblical conie must have been apparent.

The use of "other conies" in World Encompassed illustrates the diversity of the appellation Conie. In describing the detail of the head and body, Famous Voyage states: "their bodies in bignes as be the Barbarie Connies, their heads as the heads of ours," whereas World Encompassed combines the two statements to read: "their heads and bodies, in which they resemble other Conies, are but small." In the latter account Conies is used as an inclusive term to cover both identifications separately stated in Famous Voyage, and also sets conditions of size and shape.

Camden, when translating the original account into Latin, used "cuniculis" for Conies. So too, Dudley, translating into Italian, used "Conigli" for Conies. Davidson's translation from Italian back into English unfortunately strayed, and used the word rabbits. The word

Conie is derived etymologically from the Latin cuniculus, meaning rabbit. In 16th Century England the word rabbit was usually applied to a young rabbit, an old rabbit being called a coney.¹

Detailed Criteria to be met for Positive Identification

In the following, each of the previously developed conditions for identification of the Nova Albion Conie are used as criteria to be met in making satisfactory identification.

Basic description

Famous Voyage and World Encompassed set the same basic conditions:

1. It was a rabbit-like animal.
2. It was terrestrial.
3. It inhabited either holes in the ground or crevices in the rocks.
4. It was not known to members of Drake's party.

Population

Famous Voyage sets two conditions:

1. The whole country reconnoitered by Drake was inhabited by Conies.
2. Conie burrows were in evidence.

1. The Oxford University Dictionary on Historical Principles, 3rd. edition, Clarendon Press, Oxford, 1955, p. 1645 under "Rabbit" and p. 389 under "Cony."

World Encompassed sets two more conditions:

3. A multitude of Conies was seen on the inland journey.
4. The Conies outnumbered the "Deere," which were estimated to number thousands in a herd.

The Annales and Carta Particolare add nothing further.

The extremely detailed total description of the Nova Albion Conie, as given in the accounts, indicates that the animal was closely observed while engaged in its normal pursuits. There is positive, detailed association drawn between the animal and its burrow; giving validity to the Famous Voyage account in which numbers are not actually mentioned --- just the warren. The numerical evidence of the burrows was a simple yardstick to use in estimating the number of animals,¹ for while the English had no way of knowing how many burrow signs represented one Conie, they were familiar with the burrows of the common European wild rabbit, and they likened the Conies to small rabbits.

Head Detail

Famous Voyage sets a condition of the Conie's head being "as the heads of ours;" this does not necessarily relate to size, but more likely to shape. World Encompassed states of the heads that they resemble those of other Conies,

1. It is significant that in describing the number of "Deere" seen, the accounts do not state specifically how many were actually seen. World Encompassed states of the "Deere," . . . we saw by thousands, as we supposed . . . Such conjectural descriptive devices are used repeatedly in the total account.

and stresses the exception that the heads are smaller than those of the other Conies. The conditions to be met then are:

1. The head was small when compared to that of an English Conie (rabbit) or Barbary Conie.
2. The head resembled the head of a rabbit or hyrax in these general characteristics:
 - a. The head was set close to the body.
 - b. The ears were small. (The hyrax has small ears and the rabbit's ears are small when compared to those of a hare.)
 - c. The head is large in proportion to the body.
 - d. The teeth were either of the chisel type or large, triangular incisors.
 - e. The general head configuration resembled, generally, that of a rabbit or hyrax.

Body

Famous Voyage gives the condition:

1. The body was the size of a Barbary Conie.

World Encompassed sets two more conditions:

2. The body was small when compared to an English Conie or Barbary Conie.
3. The configuration resembles that of an English Conie or Barbary Conie. (These animals are very similar in body shape.)

Feet

Both Famous Voyage and World Encompassed assign the feet of a mole. World Encompassed likens the feet to paws. The mole of Elizabethan England was the European Mole (Talpa Europa). The forefeet of the European mole are very large, hand-like, and have strong, blunt claws for moving

earth. The hindfeet are much narrower and smaller, with very sharp claws. The three conditions for the feet are:

1. Large, hand-like forefeet
2. Narrow, smaller hindfeet
3. Special digging claws on the feet

Special attention was paid to the feet of the Nova Albion Conie as they were different from those of any other animal they called a Conie. A mole was not called a Conie, by the evidence of these two accounts.

Tail

The Famous Voyage, World Encompassed, and Carta Particolare accounts all list two conditions for the tail:

1. Like a rat's tail
2. Very long

The common rats of Europe in Drake's time varied in color and size, but not in their general tail characteristics: they all had scaly, nearly naked tails covered with short, bristly hairs. Many animals have long tails, but scaly, nearly naked tails are trademarks of the genus Rattus; they are commonly used as such for comparative purposes.

None of the accounts gives the reader a clear assumption that the Conie's tail was in all respects like that of a rat, instead they all give a condition of length. The statements "of great length," "was long," and "exceeding long," need some basis. Just what was the tail exceeding in length?

Certainly not the tail of a rat. If the Nova Albion Conie had a tail like that of a rat it would have been called a rat,¹ but there were too many differences in this particular Conie for it to be classed as a rat by members of Drake's party. This distinction of tail contrast was brought out by the statement from Carta Particolare:

". . . They saw rabbits in great numbers, except that the tail was long² like that of the rat," Dudley does not use a comma to set off the two facts pertaining to the tail of the Conie, as does World Encompassed, but he made certain to include them, even though, as with the Annales account, his account was greatly abbreviated. In all the accounts the condition of length was added, as Orr points out, to refer to the basic comparative animal, the Conie, which, whether rabbit or hyrax, had a mere stub tail.³

Chin Pocket

Famous Voyage and World Encompassed differ here only in gender. Up to this point the Famous Voyage has not

1. Scientific men later temporarily attached the name rat to the pocket gopher when they first assigned it the genus Mus. See Appendix I for illustration and detail of Mus bursarius.

2. In contrast to the rabbit's tail. Ed.

3. Robert T. Orr, "An Early Reference to California Pocket Gopher," Journal of Mammology, Vol. 30, (August, 1949). On page 318 Dr. Orr points out this comparative for tail contrast.

mentioned gender in respect to the Conie, now it uses the feminine her, and this only in two closely associated instances. World Encompassed consistantly uses the masculine his, he, himself, some eight times in the total Conie text. The conditions to be met are:

1. There was a bag on either side of the Conie's chin.
2. The bags were under the chin.
3. The Conie could place material into these bags.

Ranging for Food

Both Famous Voyage and World Encompassed agree on the basic conditions, though World Encompassed conjectures on the purpose of the actions of the animal. The conditions to be met are:

1. It went abroad from its burrow.
2. It ate food while abroad.
3. It gathered food "meate" into the bags.
4. It could be observed doing the above actions.
5. It stored food in its burrow.

Palatability

Both Famous Voyage and World Encompassed state that the people of Nova Albion ate the Conie. With the great multitudes of the animals mentioned in the accounts, meat must have been plentiful. It is not mentioned that Drake's party tried eating the Conie. Drake, as a careful military commander, probably forbade eating unknown foods. The condition to be met is:

1. The natives of Nova Albion ate the Conie.

Use of the Skin

In both Famous Voyage and World Encompassed the "Kings coate" was made of the skins of the Conie. The conditions to be met are:

1. Conie skin was used to make the "Kings coate."
2. Enough skins were used to make a coat reaching to the King's waist.
3. People attached value to these skins because the King's coat was made of them.

This third condition is based on the observer's conjecture, but it is backed by the observation that only the King's coat was made of it. The guard about him had the same kind of coat, but of "other skins". With the Conies being so numerous, there would have been no scarcity of these skins so the value attached to them was probably ceremonial. If the skins were particularly small, the great labor represented in sewing together so many small skins as to form a coat could in itself have represented great value. If there was a paucity of larger specimens of the Conie, then the rarity of the larger skins might constitute special value. Regardless, a coat of gopher skins in winter pelage would be light and soft.

IV. IDENTIFICATION

The Environment

To understand the fauna of the Drakes Bay area, one needs to understand or at least visualize the environment. Immediately surrounding Drakes Bay are high, shale cliffs, long beaches, and truncated hills sloping to the drowned valley barrier beach estero system. The hills behind the cliffs are windswept downs rising to the east to about 1,000 feet in roughly three miles to form the Inverness Ridge. As the hills rise, there are ever deepening canyons. The eastern side of the ridge is mostly composed of quartz diorite (granite), as is the massif forming the headland of Point Reyes proper. Between the Point and the crest of the Inverness Ridge the land is Miocene shale and sand, covered with grass and low, coastal shrub, except in the canyons where small streams maintain a dense vegetation of Red Alder, Live Oak, Buckeye, Ceanothus, and various herbacious plants. The Bishop Pines are heavy to the north as one approaches the ridge, but the hills to the east are barren with vegetation becoming denser where Bear Valley makes its entry to the bay through a cleft in the ridge. Behind the wind defilade of the Inverness Ridge the pines give way to Douglas Fir, which forms a belt of dense forest before it in turn gives way to such transition trees as California Bay, Madrone, and Live Oak, which continue to the

floor of the Olema Valley.

The floor of the valley, formed by the San Andreas Fault, slopes gently up to the east upon an underlying structure of Franciscan Formation (sandstone and cherts) for about $1\frac{1}{2}$ miles to crest at about 600 feet on the wind-swept Bolinas Ridge. There is a volcanic intrusion on this ridge, and the large, red, volcanic mass of Black Mountain rises immediately behind the ridge.

The west to east traverse from the mouth of Drakes Estero to beyond the Bolinas Ridge crosses varying geologic structures, each with its influence on animal distribution, plant growth, and the general ecological balances. It was generally along this traverse that Drake made his inland journey, and where his party recorded seeing so many of the "strange kind of Conies."

Small Mammals of the Area

Only part of the land in the Drakes Bay vicinity is arable. Since early Spanish occupation days it has been mostly used for pasture, with some parts too densely wooded to be used even for that. The native Roosevelt Elk has been exterminated and there are no more brown or grizzly bear, but except for some reduction in numbers, the smaller species remain essentially the same as when Drake landed here nearly 400 years ago -- among them the Conie.

The following list of small mammals comprises those that could be even remotely considered as the Nova Albion

Conie and covers those commonly found within a radius of 15 miles¹ from the site of Drake's camp:

1. Brush Rabbit (Sylvilagus bachmani)
2. Dusky-footed Wood Rat, Pack Rat (Nectoma fuscipes)
3. Botta Pocket Gopher (Thomomys bottae bottae)
4. Western Grey Squirrel (Sciurus griseus)
5. Sonoma Chipmunk (Eutamias sonomae)
6. California Ground Squirrel (Citellus beecheyi)
7. Mountain Beaver (Aplodontia rufa)
8. Long-tailed Weasel (Mustela frenata)
9. Shrew-mole (Neurotrichus gibbsi)
10. Broad-footed Mole (Scapanus latimanus)

In Chart 1 these animals are screened, using a set of criteria based on a gross interpretation of the accounts of the Nova Albion Conie. Two animals conform to these criteria: the California Ground Squirrel and the Botta Pocket Gopher. These two are again screened in Chart 2 using the detailed criteria previously developed on pages 15-21. On the basis of the 35 criteria given or implied by the contemporary accounts, the only mammal meeting all the conditions for the Nova Albion Conie is the Botta Pocket Gopher.

1. Fifteen miles is considered by the Guild to be the maximum penetration through the general terrain of the traverse achievable by the Drake party in one day.

CHART 1

Initial Screening List for Suspect Conies

<u>SUSPECT ANIMAL</u>	Evident in large numbers	Stores food in pouches	Possesses digging feet	Ratlike tail, (scaley, long, or both)	Burrowing habit	Meets all criteria
Brush Rabbit	YES	YES	YES	NO	NO	NO
Dusky-footed Wood Rat	NO	NO	YES	YES	YES	NO
Botta Pocket Gopher	YES	YES	YES	YES	YES	YES
Western Grey Squirrel	NO	YES	YES	YES	NO	NO
Sonoma Chipmunk	NO	YES	YES	YES	YES	NO
California Ground Squirrel	YES	YES	YES	YES	YES	YES
Mountain Beaver	NO	?	YES	NO	YES	NO
Long-tailed Weasel	NO	NO	YES	YES	YES	NO
Shrew Mole	NO	NO	YES	YES	YES	NO
Broad-footed Mole	NO	NO	YES	YES	YES	NO

Some researchers have identified the Nova Albion Conie with the California Ground Squirrel. The description of the tail was a strong factor influencing their decision. They chose, however, to ultimately disregard (1) that the California Ground Squirrel with its general shape, furry coat, bright eyes, and bushy tail is definitely a squirrel, and squirrels were well known in England,¹ and (2), the very clear description given of the external cheek pouches-- which are not a characteristic of any ground squirrels-- does not apply to the California Ground Squirrel. This last is the strongest bit of evidence in the accounts. The only two native mammals in the area of the study possessing external cheek pouches are the Botta Pocket Gopher and the Heerman Kangaroo Rat. The infrequent occurrence of the latter excludes it from the study. Only the Botta Pocket Gopher meets the 35 criteria.

A large male gopher measures as much as ten inches from nose to base of tail.² The characteristics,

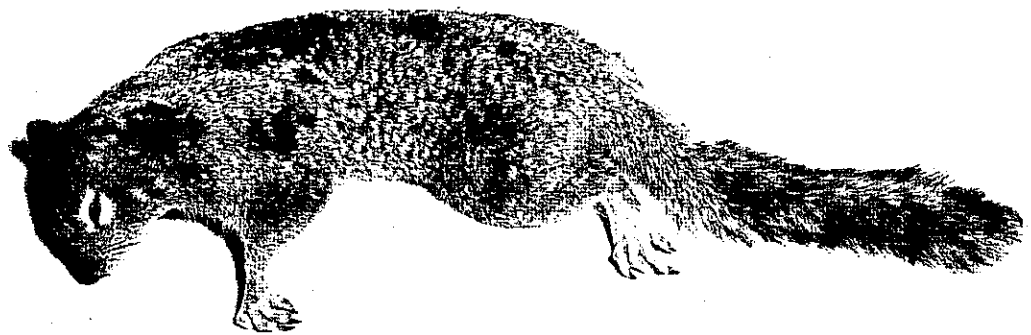
1. The Red Squirrel (Sciurus vulgaris) of England is somewhat smaller than the California Ground Squirrel, but except for color and ear-tufts is extremely similar. The contemporary Elizabethan word for squirrel was "squirrel." The European Ground Squirrel (Citellus citellus), or Suslik, was not native to the British Isles, but the Elizabethans reasonably had knowledge of it.

2. As observed by the Guild at Point Reyes in 1956. The specimen was taken on the David McClure Ranch on Pierces Point.

CHART 2

Full Criteria Screening List for Suspect Conies

	Calif. Ground Squirrel	Botta Pocket Gopher
<u>Basic description</u>		
rabbit-like	YES	YES
terrestrial	YES	YES
in holes & crevices	YES	YES
unknown to Drake	YES	YES
<u>Population</u>		
throughout country	NO	YES
burrows evident	YES	YES
multitude seen	?	YES
outnumbered "Deere"	?	YES
<u>Head</u>		
comparatively small	YES	YES
like other Conies	YES	YES
close to body	YES	YES
ears small	YES	YES
head large	NO	YES
tooth shape	YES	YES
general shape	YES	YES
<u>Body</u>		
size of Barb. Conie	YES	YES
small size	YES	YES
general shape	YES	YES
<u>Feet</u>		
large forefeet	NO	YES
small hind feet	NO	YES
digging claws	YES	YES
<u>Tail</u>		
like a rat's	NO	YES
very long	YES	YES
<u>Chin pocket</u>		
bag on either side	NO	YES
bags under chin	NO	YES
bags accessible	NO	YES
<u>Ranging for food</u>		
leaves burrow	YES	YES
ate food abroad	YES	YES
put food into bags	NO	YES
observed doing	NO	YES
stored food	YES	YES
<u>Palatability</u>		
eaten by natives	YES	YES
<u>Use of skin</u>		
for coat	YES	YES
number used	YES	YES
valued	?	?



Robert Allen

California Ground Squirrel (Citellus beecheyi)
($\frac{1}{4}$ nat. size)



California Academy of Sciences

European Red Squirrel (Sciurus vulgaris)
($\frac{1}{3}$ nat. size)

range, and habits of the gopher support the observations recorded in the accounts. Even today the country about Drakes Bay is riddled with gopher holes. The range of the Botta Pocket Gopher¹ includes all of Marin County. Grinnell's distribution map shows the range of the California Ground Squirrel to extend westward to the Bolinas Ridge,² about nine miles from the site of Drake's camp. Recent investigations indicate that a few ground squirrels are now found on the eastern side of the Inverness Ridge. Grinnell's pocket gopher distribution map shows that nearly all of California is ranged by these animals, with the species bottae bottae extending along the coastal strip from Sonoma County to Baja California, and the species bottae laticeps infesting the California coast as far north as Oregon. Evidence for the location of Drake's landing based solely on the presence of the Conies would give one the choice of any point along the California coast. The gopher is the most universally distributed rodent in California, according to Grinnell. It is not native to Europe.

The gopher is a small, fossorial animal which spends most of its life underground burrowing for roots and bulbs, occasionally coming out of its burrow to range for nearby

1. Joseph Grinnell, "Geography and Evolution in the Pocket Gophers of California," Annual Report of the Smithsonian Institution 1926, p. 347, fig. 1.

2. J. Grinnell and J. Dixon, "Natural History of the Ground Squirrels of California," Bulletin of the California State Commission of Horticulture, VII, (Nov.-Dec., 1918), pp. 597-709.

plants or to mate during season. Mostly nocturnal in its above-ground habits, the gopher does occasionally come out by day. The observer(s) in the Drake accounts noted how it foraged, wrote an excellent description of it, and must have spent a good deal of time patiently watching the animal.¹

The accounts tell of how the Conie gathers its food into two bags under its chin and are quite accurate, for the gopher uses its hands to stuff the food into the external fur-lined pouches from underneath. The pouch openings are parallel to the mouth and the pouches extend about $1\frac{1}{2}$ or 2 inches back under the skin of the shoulders.

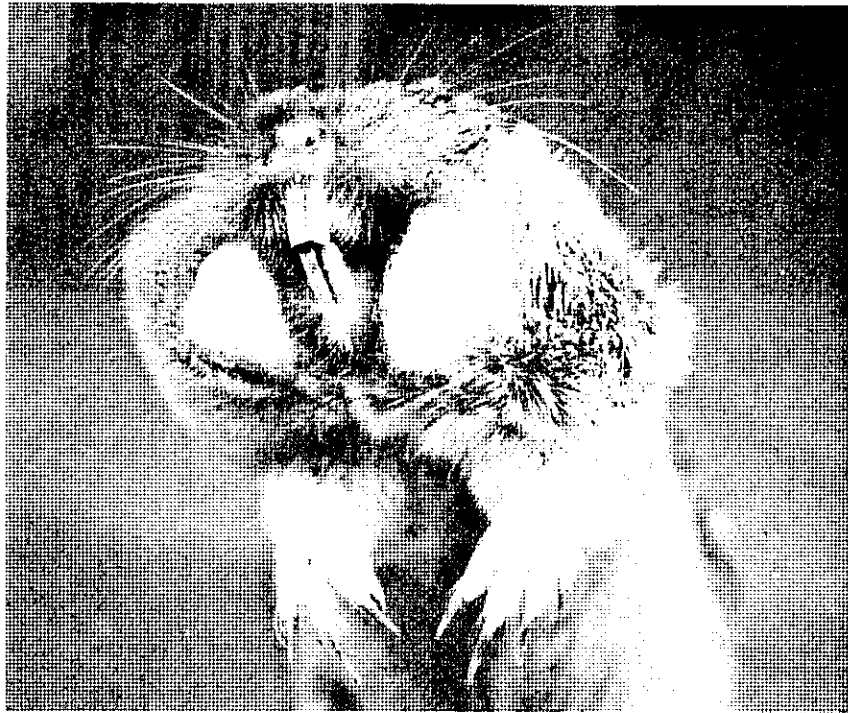
Another observation noted in the accounts was that the gopher gathered the food into its pouches after it had eaten. According to Bailey,² a gopher actually first cuts the foraged plants into small pieces with its teeth and then stuffs the sized material into the pouches. It is a very quick action, with the motion of the hands about all you can see unless observed closely.

The gopher was a common food of the California Indians, who made small, special meat mortars for macerating such small rodents.³ Drake's chronicler reported that the

1. This required some patience, as the gopher, with poor eyesight, is very wary of such enemies as hawks, owls, coyotes, bobcats, and man.

2. Vernon Bailey, "Revision of the Pocket Gophers of the Genus *Thomomys*," North American Fauna No. 39, U.S. Dept. of Agriculture, Bureau of Biological Survey, p. 16.

3. A.L. Kroeber, Handbook of the Indians of California, pp. 323, 448.

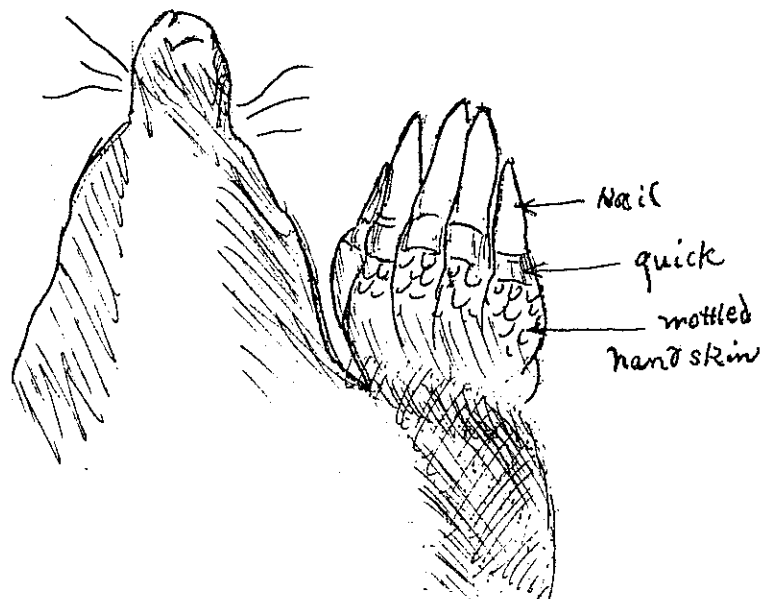


Robert Allen

Botta Pocket Gopher (The chin pouches are filled with cotton.)

MOLE:

RIGHT
HAND, from Above.

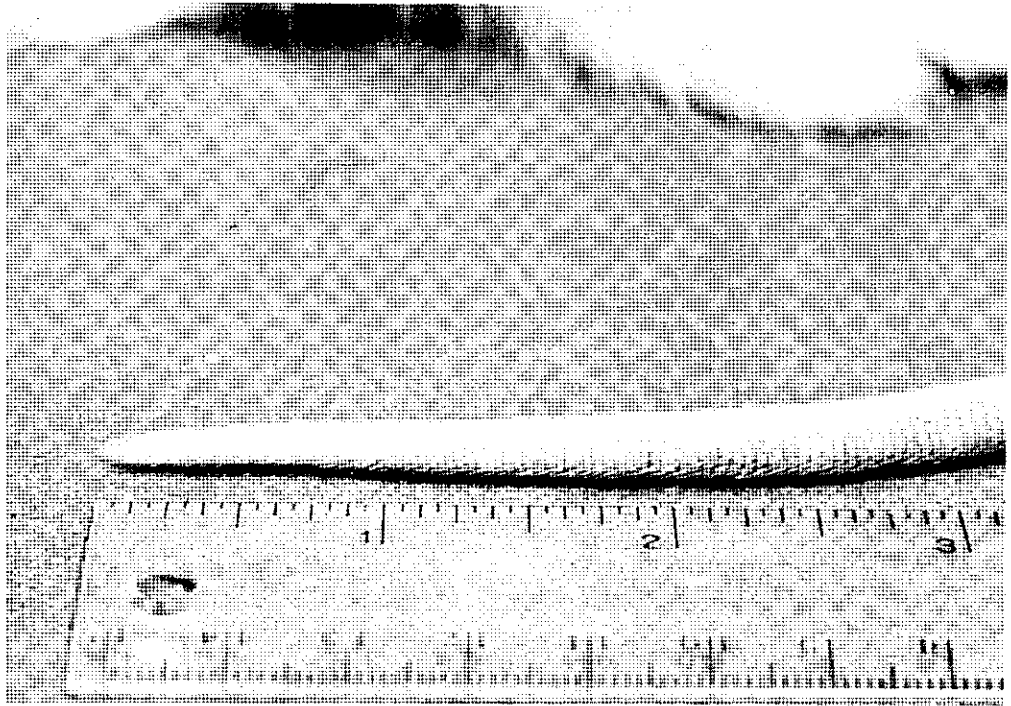


European Mole (Talpa europaia) Hand Detail

Indians of Nova Albion ate the gopher, but it is not reported that any members of Drake's party tried the flesh. Bailey reports eating gopher meat. He states, "Their flesh is tender and well flavored, and were the animals large enough they might be made a valuable adjunct to our meat supply The meat is rather dark and fine-grained, tender, and in flavor not unlike that of a squirrel. Sometimes it is rather strongly flavored with wild onions, but to some this is not unpleasant."¹

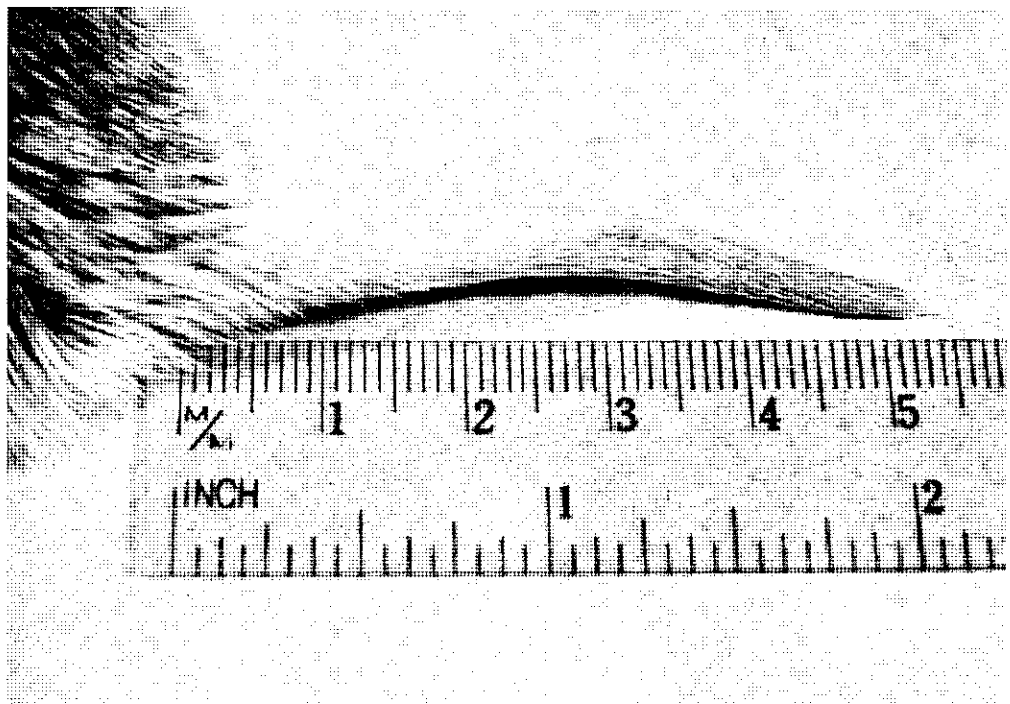
The gopher's head, shoulders and arms are highly developed for digging. According to Grinnell, most of the digging is done with its upper incisor teeth, the chest and paws being used to move the earth about. This use of the teeth caused a tremendous development of the skull to provide anchorage for the powerful jaw muscles, and makes the skull the largest for its size of any mammal in California. Continuous digging has caused great development of the anterior part of the body, including the short forelegs and large, enormously-clawed forepaws, with the back paws being small, but also sharply clawed. The mole's fore and hind foot arrangement is quite similar and is used as a basis of comparison in the accounts. A mole does its digging with its forepaws (whereas a gopher uses its teeth) and they are even larger in relation to its body than a gopher's. The mole's foreclaws are worn from digging, whereas the gopher's remain long and sharp, so long as to be folded completely

1. Bailey, op. cit., p. 13.



Robert Allen

Tail of a Norway Rat (Rattus norvegicus)



Robert Allen

Tail of a Botta Pocket Gopher (Thomomys bottae)

under when walking, causing it to walk on the tops of its nails. Both animals are very short necked.

The pocket gopher's tail is a most useful tool. Naked on the very tip, it is nearly identical to the last $3\frac{1}{2}$ inches of a Norway Rat's tail. This naked tip is a sensitive device used to feel its way as it retreats into its burrow; its use has been likened to a blind man's use of a cane.¹ A gopher's whiskers perform a similar function when moving forward in the dark of the tunnel.

This animal spends its life within a limited area, its only migration, according to Grinnell, being by extension of its tunnels. These are built with escape routes, food storage chambers and food collection tunnels. When the gopher has finished using a tunnel opening, or when danger threatens, it plugs up its hole, leaving a small mound of earth. A gopher will use a tunnel opening to get rid of earth displaced by its underground digging. These are the large mounds one normally sees, and which Drake's party saw and commented on.

The gopher's skin varies in quality from winter to summer. Bailey states that in the winter the pelt is long, full, and soft, whereas in the summer it is thin and harsh. In their prime these pelts are quite suitable to sew into

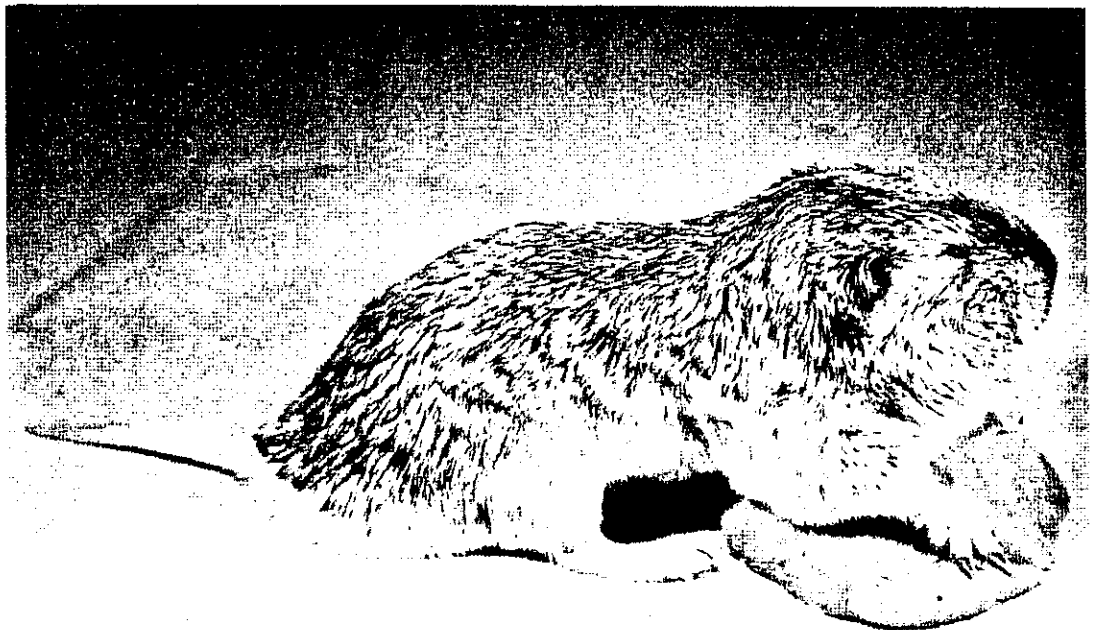
1. National Geographic Society, Wild Animals of North America, p. 263 (see caption under picture).

a waist-length cloak such as the "Kings coate." The fact that the various accounts assigned special value to the Conie skin coat in that it was worn by the King alone is a matter of ethnographic interest, for it indicates that gopher skins may have (1) formed a part of the California Coast Miwok Indians' ceremonial customs, and (2) that in one case it was selected by an Indian of high station as the proper material for his garb under the particular circumstances recorded. It raises a positive question which may lead to future research as to the status of the gopher, besides as food, among the Indian tribes of California.



San Diego Zoological Society

Cape Hyrax (Procavia capensis). A cony of Africa.
(1/3 nat. size)



Robert Allen

Botta Pocket Gopher (Thomomys bottae)
(2/3 nat. size)

V. CONCLUSION

Based on research by the Drake Navigators Guild and studies by recognized mammalogical authorities, the small animal of an unfamiliar type encountered in Nova Albion by the English, and called by them "a strange kind of Conies," is positively identified as the Botta Pocket Gopher, Thomomys bottae bottae.

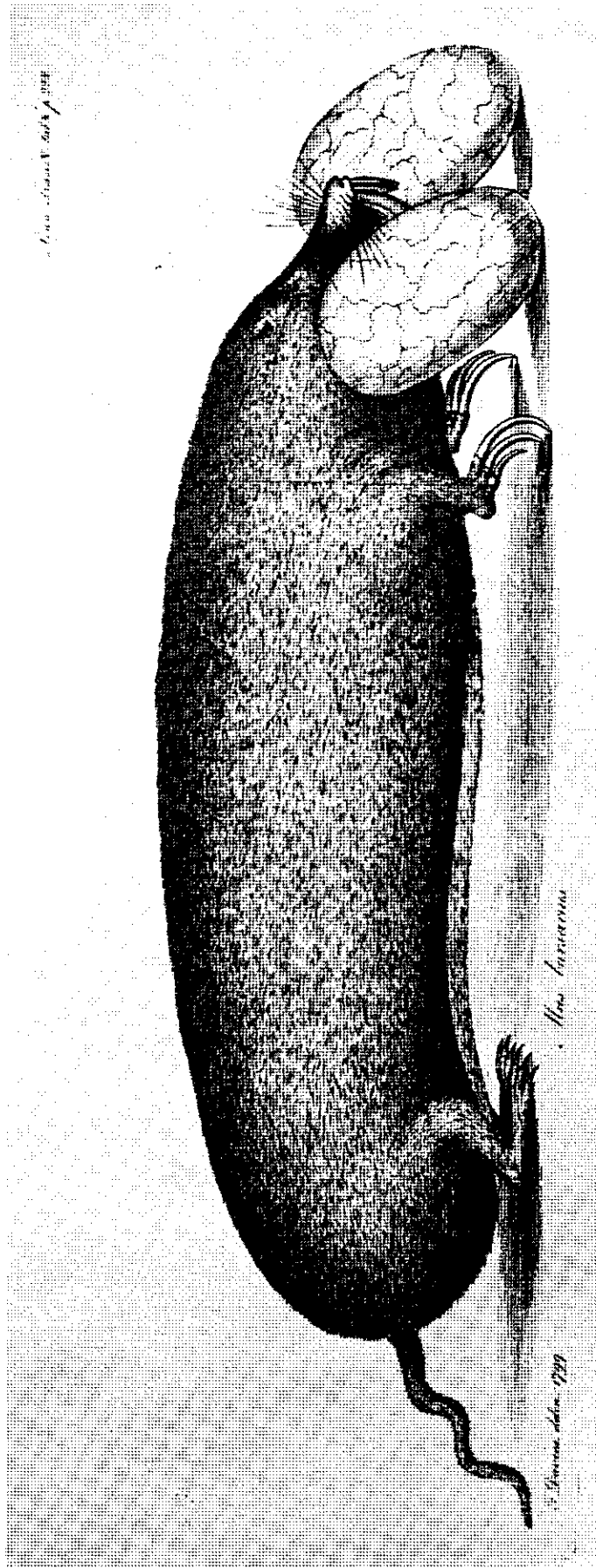
APPENDIX I

EXTRACT FROM JAMES BURNEY, "A CHRONOLOGICAL HISTORY OF THE DISCOVERIES IN THE SOUTH SEA OR PACIFIC OCEAN."

During the 17th and 18th centuries many collection of voyage accounts were published. Although the compilers and editors drew largely on Hakluyt, World Encompassed, and Camden for material on Drake's voyage, they took such liberties with the original texts that the works are of value only for interesting reading and general information, but dangerous if used for serious historical research. The Hakluyt Society, established in 1846 with the objective of publishing original narratives of important voyages and travels, has made accurate accounts readily available. Modern library practice and reproduction processes have made original documents accessible to the modern researcher.

Captain James Burney had visited the Northwest Coast with Captain James Cook's expedition, whose landfall was on the Oregon Coast, and did not see the coast of California. In 1803-17 he published his five volume set, A Chronological History of the Discoveries in the South Sea or Pacific Ocean. His paragraph relative to the Nova Albion Conie is given below, as well as his interesting footnote.

Near the villages of the natives were seen large herds of fat deer, a thousand in a company; and in every part of the country there were great numbers of a species of rabbit, 'about the size of a Barbary rat; their heads and bodies like other conies, but smaller; their tails like that of a rat, and their feet like the paws of a mole. Under their chins on each side they have a bag



(Approx. 3/4 nat. size)

Mus bursarius

into which they gather their meat when their bellies are full, to feed their young, or serve themselves another time.' Their flesh was good eating; and their skins were much esteemed by the natives, the state dress of their king being made of them.*

* The World Encompassed; and the Voyages of the Ever Renowned Sir Francis Drake. 12^{mo} p. 100. Edit. 1683. A paper inserted in the Transactions of the Linnean Society, presented by George Shaw, M.D., contains a description of an animal, which seems to be of the same species, under the name Mus Bursarius; with a drawing communicated by Major General Thomas Davies. 'This quadruped was taken by some Indian hunters in the upper parts of Interior Canada and sent to Quebec. It is in the possession of Governor Prescot.' Vol. V. p. 228

Although the Mus Bursarius differs from the Botta Pocket Gopher in detail, it has many similarities.

APPENDIX II
THE BIBLICAL CONIE

The four Old Testament references in which the Hebrew word shaphan was translated by 16th Century English scholars as conie (Leviticus XI:5, Deuteronomy XIV:7, Psalms CIV (CIII):18, and Proverbs XXX:26) are presented below; from the King James version (Authorized Version, or AV); from several 16th Century versions; from the Latin of 1532; the Latin Vulgate edition of 1959; and the Wycliffe and Purvey versions of the late 14th Century.

Edward Topsell in The History of Four-footed Beasts, Serpents, and Insects, 1658, which was largely translated and collected out of the writings of Conrad Gesner (1516-1565), argued for cony (rabbit) rather than choerogrillus (hedge-hog or "porcupine").¹ In Hierozoicon: Sive bipartitum opus de Animalibus Sacrae Scripturae, London, 1663, Samuel Bochart compiled all earlier translations and writings on fauna of the Bible into this work in Latin and compared the Greek, Arabic, Hebrew, and other Semitic languages.² Canon Henry Baker Tristram of Durham in the 1870's and 1880's presented the results of his studies of the flora and fauna of the Holy Land (The Natural History

1. See pp. 86-87

2. See columns 1001-1017

of the Bible, Fauna and Flora of Palestine, and other works) which largely removed the confusion of centuries by identifying the animal as the Hyrax syriacus.

The 1881-1885 Revised Version (RV) of the King James Version uses coney and has marginal note "Heb. shaphan, the Hyrax Syriacus or rock-badger." This was followed in the American Standard Revised Version of 1901. The Revised Standard Version of 1946-1952 uses rock-badger in Leviticus and Deuteronomy, and badgers in Psalms and Proverbs.

The Catholic Douay-Rheims Version (1941 printing) has cherogrillus in Leviticus, cherogrill in Deuteronomy, irchins in Psalms, and rabbit in Proverbs. A footnote in Leviticus indicates a preference to keep the Latin names rather than try to translate them into English. In the Catholic Family Edition, 1953, the first eight books of the Old Testament and the entire New Testament are in the Confraternity of Christian Doctrine text, and the remaining books (including Proverbs) are in the Challoner-Douay Text. Leviticus, Deuteronomy, and Psalms have rock-badger. Proverbs has rabbit. A footnote in Psalms identifies the rock-badger as the Hyrax, and refers also to the other three verses.

In various other 20th Century versions coney has generally given way to rock-badger, rock-rabbit, or hyrax.

Biblical dictionaries generally identify the shaphan as the Hyrax, and point out that the "rock-badger" is not related to the badger, nor the "rock-rabbit" to the rabbit, nor is the Hyrax a ruminant although it gives the appearance of being one.

REFERENCES TO THE CONEY IN THE KING JAMES
VERSION OF THE BIBLE

Leviticus XI

3. Whatsoever parteth the hoof, and is clovenfooted and cheweth the cud, among the beasts, that shall ye eat.

[4, 5, 6, exclude the camel, coney, hare, and swine.
Ed.]

5. And the coney, because he cheweth the cud, but divideth not the hoof; he is unclean unto you.

Deuteronomy XIV:8

6. And every beast that parteth the hoof, and cleaveth the cleft into two claws, and cheweth the cud among the beasts, that ye shall eat.

7. Nevertheless these ye shall not eat of them that chew the cud, or of them that divide the cloven hoof; as the camel, and the hare, and the coney: for they chew the cud, but divide not the hoof; therefore they are unclean unto you.

8. And the swine....

Psalms CIV

18. The high hills are a refuge for the wild goats; and the rocks for the conies.

Proverbs XXX

24. There be four things which are little upon the earth, but they are exceeding wise.

[25, 26, 27, 28, refer to ants, conies, locusts, and spiders. Ed.]

26. The conies are but a feeble folk, yet make they their houses in the rocks.

REFERENCES TO THE CONEY IN SOME 16th CENTURY
ENGLISH BIBLES

Leviticus XI

1540

...euē so the conye, whych chaweth the cud but deuy-
deth not the hoofe: he is uncleane to you.

1541

...even so the conye, whyche chaweth the cud but
deuydeth not the hoofe. He is uncleane to you.

1549

...And the cony for he cheweth the cud but deuideth
not the hoofe into two clawes, therefore he is uncleane
to you.

1550

The conyes chewe the cud / but they divide not the
hoofe into two clawes / therfore they are uncleane unto
you.

1576

5. Likewise the conie, because he cheweth the cud and
deuideth not the hoofe, he shalbe uncleane to you.

Deuteronomy XIV

1540

Neuerthelesse, these ye shall not eate of them that
chewe cud and of them that deuyde and cleaue the hofe:
the camell, and hare and the conye: whych chewe cud, but

deuyde not the hoffe: therefore are they uncleane unto
you:....

1541

...Neuerthelesse, these ye shall not eate of: them
that chewe cud, and of them that deuyde & cleaue the hofe:
the camell, the hare, & the cony: whiche chewe cud, but
deuyde not the hofe: therefore are they unclean unto
you:

1549

...Neuerthelesse, these ye shall not eate of thē that
chewe cud, & of thē y^t deuyde & cleaue the hoffe: the
Camell, the hare, & the cony. For they chew cud, but,
deuide not the hoffe: & therefore are unclene unto you:

1550

...Neuertheless/ these shal ye not eate of thē that
chewe cud/ and deuide not the hofe into two clawes: The
camell/ the hayr/ and the conye/ for though they chewe cud/
yet deuyde they not the hofe/ therefore shal they be un-
clean unto you....

1576

7. But these ye shall not eat, of them that deuide &
cleaue the hoofe onely: the camell, nor the hare, nor the
cony: for they chewe the cud, but deuide not the hoofe:
therefore they shal be uncleane vnto you:

Psalms CIV (CIII)1540 (CIV)

The hye hilles are a refuge for the wilde goats, and so are the stony rockes for the conyes.

1541 (CIV)

The hye hylles are a refuge for the wylde goates, and so are the stonye rockes for the Conyes.

1549 (CIV)

The hilles are a refuge for the wild goates, (t so are the stony rockes for the conyes.

1550 (CIII)

The hylles are a refuge for the wylde goates/ and so are the stonyrocks for the conies.

1576 (CIV)

18. The high mountaines are for the goates: the rockes are a refuge for the conies.

Proverbs XXX1540

These be foure thynges i the earth, the which are very lytle: but in wysdome they exceade the wyse. . . . The Conyes are but a feble folke, yet make they theyr couches amonge the rockes.

1541

These be foure thynges in the earth, the whiche are very lytle: but in wysdom the exceade ye wyse. . . . The

conyes ar but a feble folke, yet make they theyr couches
among the rockes.

1549

There be foure things in the earth, yt which are
very litle: but in wysedome they exceade the wyse. . . .
The Conyes are but a feble folke, yet make they their
couches amonge the rockes.

1550

There be foure things in the earth / the whiche are
very lytle: but in wysedome they exceede the wyse. . . .
The conyes are but a feble folke / yet make they theyr
chouches among the rockes.

1576

24. These be foure smal things in the earth, yet they
areⁿ wise and ful of wisdome:

25

26. The conies a people not mighty, yet make they
their houses in the rocke:

[Marginal note n reads: "They conteine great doctrine
& wisdome."]

THE SAME REFERENCES IN THE LATIN VULGATE, 1532

Leviticus XI

Chirogrillus¹ qui ruminat, vngulamq; non diuidit,
immundus est.

1. Cuniculus

Deuteronomy XIV

. . . Omne animal quod⁶ in duas partes findit vngulam⁷
& ruminat, comedetis: de ijs autem quae ruminant,
& vngulam⁷ non findūt,⁷ haec comedere non debetis:
camelum, leporem,⁸ cyrogryllum. Quia ruminant & non
diuidunt vngulam, immunda erunt vobis. . . .

8. Cuniculum,

Psalms CIII

. . . motes excelsi ceruis, petra refugium herinacijs.

Proverbs XXX

Lepusculus⁸ plebs inualida, qui collocat in petra
cubile suu:

8. Cuniculus

THE SAME REFERENCES IN THE LATIN VULGATE EDITION OF 1959

Leviticus XI

5. Choerogryllus qui ruminat unguamque non dividit,
immundus est.

Deuteronomy XIV

6. Omne animal quod in duas partes findit unguam et
ruminat comedetis;

7. de his autem quae ruminant et unguam non findunt,
comedere non debetis, ut camelum, leporem, choerogryl-
lum: haec, quia ruminant et non dividunt unguam,
immunda erunt vobis.

Psalms CIII

18. Montes excelsi cervis, petra refugium herinaciis.

P.S. IUXTA HEBRAEOS 104:18

Montes excelsi cervis, petra refugium ericiis.

NOVA PS. VERSIO 103(104):18

Montes excelsi ibicibus, petrae hyracibus perfugium
praestant.

Proverbs XXX

26. lepusculus plebs invalida, qui collocat in petra
cubile suum;

THE SAME REFERENCES IN THE WYCLIFFE BIBLE

Leviticus XI

An vrchon, that chewith kude, and dyuideth not the clee, is vnclene; an haar forsothe, for an he chewith kude, but the clee he dyuidith not; and a sowe

Deuteronomy XIV

And of thes that chewen code, and dyuyden not clee, thes þe shulen not eete; chameyl, haare, yrchun . . . ; a suwe forsothe,

Psalms CIII

. . . the ston refut to irchounes.

Proverbs XXX

Foure thingus ther ben the leste of erthe, and thei ben wisere than wise men; . . . a litle hare, a folc vnmy₂ti, that in a ston his bed settith;

THE SAME REFERENCES IN THE WYCLIFFE
(PURVEY) BIBLE

Leviticus XI

A cirogrille, which chewith code, and departith not
the clec, is vnclene; and an hare . . . and a swiyn
. . . .

[Among variations in the many manuscripts are:

"a cirogrille, that is, a beeste ful of thornes,
and more than an irchoun."

"In Ebru it is a cony."

"Cirogrille, ether a conyng"

"cirogrille, or a cony" Ed.]

Deuteronomy XIV

. . . a camel, an hare, and a cirogrille, that is, a
beeste ful of prickis, and is more than an irchoun;
. . . also a swyn . . .

Psalms CIII

. . . a stoon is refutt to irchouns. . . .

Proverbs XXX

. . . Foure ben the leeste thingis of erthe, and tho
ben wisere than wise men; . . . a hare a puple vnm^zti,
that settith his bed in a stoon; . . .

BIBLIOGRAPHY

- Aker, Raymond, M.P. Dillingham and Robert Parkinson, Nova Albion Rediscovered, MS, Point Reyes, California, 1956. (Copies at Bancroft Library and California Historical Society.)
- Bailey, Vernon, "Revision of the Pocket Gophers of the Genus Thomomys," North American Fauna No. 39, U.S. Dept. of Agriculture, Bureau of Biological Survey, Washington, D.C., Govt. Printing Office, 1915.
- Bancroft, Hubert H., History of California, I, San Francisco, 1884.
- Bible, English, 1540. The Byble in Englyshe . . . with a prologe therinto, made by Thomas (Cranmer) arch-bysshop of Cantorbury . . . (London) Printed by Edward whytchurche, 1540. "An edition of the Great Bible."
- Bible, English, 1541. The Byble in Englyshe . . . Ouer-sene and perused . . . by . . . Cuthbert (Tunstall), bysshop of Duresme, and Nicolas (Heath) bisshop of Rochester. (London) Printed by Rycharde Grafton 1541. "An edition of the Great Bible."
- Bible, English 1549. The Byble . . ., London, Imprynted by Jhon Daye and William Seres, 1549. "A reprint of Matthew's Bible of 1537. . . edited by Edmund Becke."
- Bible, English, 1550. The Whole Byble; that is the holy scripture of the Olde and New testament Faithfully translated into Englyshe by Myles Couerdale, and newly ouer sene and correcte . . ., (Zurich). Prynted (by C. Froschover) for Andrewe Hester, 1550. "A reprint of Coverdale's translation (1535)."
- Bible, English, 1576. The Bible . . ., London, Imprinted by Christopher Barkar, 1576. "An edition of the Geneva Bible.
- Bible, Latin, 1532. Biblia Breves in Eadem Annotationes . . ., Paris, Ex officina Roberti Stephani. 1532.
- Bible, Latin, 1959. Biblia Sacra, vulgatae editionis . . ., Marietti, 1959.

- Bible, English. The Holy Bible, containing The Old and New Testaments . . . in the earliest English Versions made from the Latin Vulgate by John Wycliffe and his followers. Edited by Rev. Josiah Forshall and Sir Frederic Madden, Oxford, Oxford Univ. Press, 1850, 4 vols.
- Bochart, Samuel, Hierozoicon: Sive bipartitum opus de Animalibus Sacrae Scripturae, London, 1663.
- British Museum, Catalogue of the Ungulate Mammals in the British Museum (Natural History), Vol. V, London, 1916.
- British Museum, Guide to the Great Game Animals (Ungulate) in the Dept. of Zoology, British Museum (Natural History), London, 1907.
- Burton, Maurice, Systematic Dictionary of Mammals of the World, New York, Crowell, 1962.
- Burney, James, Captain, R.N., A Chronological History of the Discoveries in the South Sea or Pacific Ocean, 5 vols., London, 1803-1817.
- Camden, William, Annales Rerum Anglicarum et Hibernicarum, regnante Elizabetha, ad Annvm Salvts M.D. LXXXIX, London, 1615.
- _____, Annales, The True and Royall History of the famous Empress Elizabeth, A. Darcie, transl., London 1625.
- Davidson, George, Identification of Sir Francis Drake's Anchorage on the Coast of California in the Year 1579. San Francisco, California Historical Society, 1890.
- _____, Francis Drake on the Northwest Coast of America, San Francisco, Geographical Society of the Pacific, 1908.
- Doyle, John T., Introduction to Palou, Noticias de la Nueva California, Vol. I, San Francisco, 1875.
- Drake, Sir Francis, bart., comp., The World Encompassed by Sir Francis Drake . . . London, 1628. Reprinted in The World Encompassed and analogous contemporary documents concerning Sir Francis Drake's circumnavigation of the world. . ., N.M. Penzer, ed., London, The Argonaut Press, 1926.
- Drimmer, Frederick, ed., The Animal Kingdom, Vol. I, New York, Doubleday, 1954.
- Dudley, Robert, Dell' Arcano del Mare . . ., Florence, 3 vols., 1630, 1646, 1647, Vol. 3, 1647.

- Grinnell, Joseph, "Geography and Evolution in the Pocket Gophers of California," Annual Report of the Smithsonian Institution 1926, Publication No. 2894, Washington, D.C., Govt. Printing Office, 1927.
- _____, and J. Dixon, "Natural History of the Ground Squirrels of California," Bulletin of the California Commission of Horticulture, VII, (Nov.-Dec., 1918), 597-709.
- Hakluyt, Richard, The Principall Navigations, Voiages, and Discoveries of the English Nation . . ., London, 1589. (Facsimile reprint in two volumes as Hakluyt Society Extra Series No. XXXIX, Cambridge, 1965.)
- _____, The Principal Navigations Voyages Traffiques & Discoveries of the English Nation, London, J.M. Dent & Sons, 1927.
- Kroeber, A.L., Handbook of the Indians of California, (Facsimile reprint of 1925 Bulletin 78 of the Bureau of American Ethnology of the Smithsonian Institution), Berkeley, Calif., California Book Co., 1953.
- Linnean Society, Transactions, Vol. V: 228 (1800)
- National Geographic Society, Wild Animals of North America, 3rd printing, Washington, D.C., 1960.
- Nimitz, Chester W., Fleet Admiral, U.S.N., "Drake's Cove-- A Navigational Approach to Identification," Pacific Discovery, XI, (March-April, 1958), 12-20.
- Oko, Adolph S., "Francis Drake and Nova Albion," California Historical Society Quarterly, XLIII (June, 1964), 135-158.
- Orr, Robert T., "An Early Reference to the California Pocket Gopher," Journal of Mammalogy, Vol. 30 (August, 1949).
- Penzer, N.M., ed., The World Encompassed and Analogous contemporary documents concerning Sir Francis Drake's circumnavigation of the world . . . London, The Argonaut Press, 1926.
- Stillman, J.D.B., "Did Drake Discover San Francisco Bay?", Overland Monthly, I (October, 1868), pp. 334-335.
- _____, Seeking the Golden Fleece, San Francisco, 1877.
- Topsell, Edward, The History of Four-footed Beasts, Serpents, and Insects, London, 1658, 3 vols.

Tristram, Canon Henry Baker, The Natural History of the Bible,
London, 6th ed., 1880.

_____, Fauna and Flora of Palestine, London, 1884.

Von der Porten, Edward P., "Our First New England," United States Naval Institute Proceedings, vol. 86 (December 1960), 62-66.

Wagner, Henry R., Sir Francis Drake's Voyage Around the World; its aims and achievements, San Francisco, John Howell, 1926.

Walker, Ernest P., et al., Mammals of the World, Vol. II
Baltimore, Johns Hopkins Press, 1964.