



WILEY-  
BLACKWELL



A • M • E • R • I • C • A • N  
A N T H R O P O L O G I C A L  
A S S O C I A T I O N

---

The Aboriginal Population of Tidewater Virginia

Author(s): Maurice A. Mook

Source: *American Anthropologist*, New Series, Vol. 46, No. 2, Part 1 (Apr. - Jun., 1944), pp. 193-208

Published by: [Blackwell Publishing](#) on behalf of the [American Anthropological Association](#)

Stable URL: <http://www.jstor.org/stable/663079>

Accessed: 11/02/2011 14:07

---

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at <http://www.jstor.org/action/showPublisher?publisherCode=black>.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).



*Blackwell Publishing and American Anthropological Association* are collaborating with JSTOR to digitize, preserve and extend access to *American Anthropologist*.

<http://www.jstor.org>

## THE ABORIGINAL POPULATION OF TIDEWATER VIRGINIA

By MAURICE A. MOOK

IN HIS recent study of native American population<sup>1</sup> Kroeber comments upon the lack of data for some areas and the possession of only uncritically made estimates for others. He says that "What we need is primary c'ata—step-by-step records or local estimates by conservative contemporaries, which will yield interpolations for the gaps, and can then be used as a basis for comparative estimates for less accurately described areas. It is only a matter of labor and fair judgment to extract these data from the documentary sources and thus give us reasonably reliable knowledge."<sup>2</sup>

Extraction of native population data from contemporary historical records is possible for the Algonkian area of Tidewater Virginia (sub-area E12d of Kroeber's monograph and map). For this region we are fortunate in the possession of two fairly explicit early seventeenth century ethnographic accounts—Smith's *Map and Description of Virginia* (1612), and Strachey's *Historie of Travaile into Virginia Britannia* (c. 1616). Both were based upon several years' residence and observation in the Virginia colony. Smith's is the more original account, Strachey's the more detailed.<sup>3</sup> Each author gives his estimate of the number of fighting men in each tribe at the time of his contact with them. In both cases this was the beginning of the period of disturbance caused by white settlement, which is as near as one can come to pre-contact aboriginal condition in this area.

From the data of Smith and Strachey<sup>4</sup> the following table can be constructed. Mooney's figures are taken from his *Handbook of American Indians* articles on the Algonkian tribes of the Powhatan confederacy.

---

<sup>1</sup> *Cultural and Natural Areas of Native North America* (University of California Publications in American Archaeology and Ethnology, Vol. 38, Berkeley, 1939), ch. 11, "Population," pp. 131-181. See also Kroeber's briefer *Native American Population* (AMERICAN ANTHROPOLOGIST, Vol. 36, 1934), pp. 1-25.

<sup>2</sup> 1939, p. 166.

<sup>3</sup> Smith's *True Relation*, 1608, contains no population data. Though not published until 1612, his *Map and Description* was based upon explorations among and visits to native tribes in 1607, 1608, and 1609. Smith's *Generall Historie of Virginia*, 1625, contains an ethnographic section which is largely a repetition of his *Map and Description*. The standard edition of Smith's writings is by Arber (The English Scholar's Library, no. 16, Birmingham, 1884).

Strachey's *Historie* was written c. 1616, and describes conditions of c. 1610-1612. It lay in manuscript in the British Museum, until published by The Hakluyt Society in 1849.

<sup>4</sup> Smith's *Works*, Arber ed., pp. 51-52, 347-348; Strachey's *Historie*, pp. 36-38, 56-62.

TABLE I

No.	Tribe <sup>5</sup>	Location <sup>6</sup>	Population		
			Smith <sup>7</sup>	Strachey <sup>8</sup>	Mooney <sup>9</sup>
1	Accohanoc	Eastern shore Va.	40	*40	—
2	Accomac	Eastern shore Va.	80	*80	—
3	Appomattoc	s. James r. at Appomattox r.	60	120	—
4	Arrohatic	n. upper James r.	30	60	—
5	Chesapeake	s. lower James r.	100	Extinct <sup>10</sup>	350
6	Chickahominy	middle and upper Chickahominy r.	200 <sup>11</sup>	300	900
7	Chiskiac	s. lower York r.	40 or 50	50	200
8	Cuttatawomen I <sup>12</sup>	n. lower Rappahannock r.	30	*30	120
9	Cuttatawomen II <sup>12</sup>	n. upper Rappahannock r.	20	*20	80
10	Kecoughtan	n. lower James r.	20	30	—
11	Mattaponi	Mattaponi r.	30	140	100+
12	Moraughtacund	n. lower Rappahannock r.	80	*80 <sup>13</sup>	300
13	Nansemond	Nansemond r.	200	200	700 or 800
14	Nantaughtacund	s. middle Rappahannock r.	150	*150	750
15	Onawmanient	s. lower Rappahannock r.	100	*100	400
16	Pamunkey	n. Pamunkey r. at confluence of Pamunkey and Mattaponi	300	300	1000
17	Paspahegh	n. James r. at confluence of James and Chickahominy	40	40	200
18	Piankatank	Piankatank r.	40 <sup>14</sup>	40 or 50	200
19	Pissasec	n. middle Rappahannock r.	no estimate	no estimate	—
20	Potomac	s. Potomac r. at Potomac creek	160 <sup>15</sup>	*160	800
21	Powhatan	n. upper James r. at Richmond	40	50	150
22	Quiyoughcohanock	s. middle James r.	25	60	125
23	Rappahannock	n. middle Rappahannock r.	100	*100	400
24	Secacawoni	s. lower Potomac r.	30	*30	120
25	Tauxenent	s(w). upper Potomac r.	40	*40	150
26	Warraskoyack	s. lower James r.	40 <sup>16</sup>	60	— <sup>16</sup>
27	Weanoc	n. and s. upper James r.	100	100	500
28	Werowocomoco	n. York r.	40	40	200
29	Wicocomoco	s. lower Potomac r.	130	*130	520
30	Youghtanund	middle and upper Pamunkey r.	60	70	240

<sup>5</sup> The names of the tribes vary somewhat in the early historical accounts. The spellings here used are modernized according to HAI and Swem's *Virginia Historical Index*.

<sup>6</sup> N. and s. refer to the north and south banks of the tidal rivers of Virginia. Lower, middle, and upper divide the rivers from Chesapeake Bay to the fall line.

<sup>7</sup> Smith's figures are from his *Map and Description* (1612), rather than from his *Generall Historie* (1625). The earlier work is more strictly contemporary and generally less exaggerated.

<sup>8</sup> In the Strachey column those figures marked with an asterisk are given in passages of his work which are obviously copied from Smith.

<sup>9</sup> Mooney's figures are round-number estimates, generally preceded by "about," "perhaps," "approximately," etc. Blanks indicate no published tribal estimate by Mooney.

<sup>10</sup> Strachey claimed that Powhatan conquered the Chesapeake, exterminating the entire population, with the result that "all the Chesiopeians at this daye (are) extinct" (*Historie*, pp. 101, 105). The Chesapeake were incorporated into the Powhatan confederacy by conquest, but it is improbable that the entire tribal population was exterminated. Powhatan's policy was to

Mooney wrote all but two of the thirty articles in the *Handbook* on these tribes,<sup>17</sup> and all but seven of these contained tribal population estimates—a result of his special interest in the subject at the time. He wrote the “Population” article in the *Handbook*, and in the course of its preparation accumulated the detailed information which was published posthumously twenty years later, as a separate monograph.<sup>18</sup> Smith’s and Strachey’s figures are for “able and fighting men” only, whereas Mooney’s are his estimates of total tribal populations.

In addition to the above figures Strachey enumerated the following eleven jurisdictions of chieftains under Powhatan, “together with what forces, for the present, they were able to sent unto the warrs”: Cantaunkack 100, Casapecock 100, Chepecho 300, Kaposecock 400, Mummapacune 100, Ochahannanke 40, Orapaks 50, Pataunck 100, Pamareke 400, Paracons 10, and Shamopa 100. Mooney classified Mummapacune and Pataunck as “tribes or sub-tribes” of the Powhatan confederacy,<sup>19</sup> but there is no evidence in contemporary cartographic or textual records that they should be so considered. Ochahannanke is simply Strachey’s spelling for Accohanoc, and Chepecho may have been an alternate term for the Pamunkey people.<sup>20</sup> On Smith’s map, which is extraordinarily accurate both geographically and in its native town-site locations, most of the additional “provinces” mentioned by Strachey occur as subsidiary settlements within the territory of the thirty tribes of Table I. Strachey’s supplementary list seems therefore supernumerary and his

---

execute tribal leaders, but the bulk of conquered populations were transported to other parts of Powhatan’s territory.

<sup>11</sup> In his *Generall Historie* Smith increased his estimate to “neere 250.”

<sup>12</sup> Smith’s map shows and his text claims that there were two Cuttatawomen tribes on the north bank of the Rappahannock river in 1607, one near its mouth, another “far above,” below the falls at present Fredericksburg.

<sup>13</sup> Strachey’s text as printed gives 30 warriors for the Moraughtacund. This is in a context which is practically a verbatim repetition of Smith, and the editor of the Strachey manuscript apparently incorrectly read Strachey’s 80 as 30.

<sup>14</sup> Smith’s *Generall Historie* has “about 50 or 60.”

<sup>15</sup> Smith’s *Generall Historie* has “more than 200.”

<sup>16</sup> Smith’s *Generall Historie* omits an estimate for this tribe. The fact that Mooney says Smith “omits from (his) count the people of Warraskoyac” indicates that he based his computations upon Smith’s work of 1625, rather than upon the more accurate account of 1612. Mooney’s estimates for the Chickahominy, Piankatank, and Potomac tribes also suggest that he used Smith’s *Historie* rather than *Map and Description*.

<sup>17</sup> The Quioucohanock and Rappahannock articles were by W. R. Gerard.

<sup>18</sup> *The Aboriginal Population of America North of Mexico* (Smithsonian Miscellaneous Collections, Vol. 80, No. 7, 1928, edited by J. R. Swanton). The monograph gives merely a total estimate of 9000 for the Powhatan confederacy; this was based, however, upon unpublished estimates of the population for each tribal member of the confederacy.

<sup>19</sup> *HAI*, I, p. 956; II, p. 209; II, p. 302.

<sup>20</sup> Again according to Mooney, *ibid.*, II, pp. 199, 1041.

estimates of the number of warriors are undoubtedly greatly exaggerated. For both reasons the above figures are excluded from the table.

An examination of Table I shows that Strachey's figures were based partly upon those in Smith's *Map and Description*, and that Mooney's estimates were based entirely upon the data of Smith's *Generall Historie*. Mooney multiplied Smith's figures for warriors by from  $3\frac{1}{2}$  to 5 in his computations of total tribal populations. His average multiplication ratio was  $4\frac{1}{2}$ . In contrast to this we have Smith's own suggestion of a 3 to 10 warrior to total population ratio for the natives of tidewater Virginia in 1607: "The land is not populous, for the men be fewe; their far greater number is of women and children. Within 60 miles of James Towne there are about some 5000 people, but of able men fit for their warres scarce 1500."<sup>21</sup> Smith's earlier works, in which he made this statement and from which I have taken his population estimates, show him to have been an unusually discerning observer. He was an adventurer-soldier, who in his later writings was inclined to exaggeration in describing his personal experiences. This is not, however, characteristic of his *Map and Description*, and there seems no reason for regarding his estimates in this work as other than approximately accurate for 1607-1608.

A similar point of view can not be taken toward Strachey's data. Although in his calculation of the total population of Algonkian Virginia apparently unduly influenced by Strachey, Mooney regarded some of Strachey's figures as "plainly too high." Strachey was secretary of the Virginia Colony for several years, but there is little evidence that he traveled about the tidewater area and visited tribes as Smith did in his explorations of the river valleys. Strachey frequently offers his ethnological observations as "by the relation of the savages" rather than as based upon observation, and it is likely that his population data which were not copied from Smith may have come from the same source. Smith never lived among the natives for long periods of time as, for example, Spellman did,<sup>22</sup> but there was no man in the colony with more frequent opportunities or in a better position to observe the native way of life and the full extent of the native population. In view of these considerations Smith's estimates are probably more reasonably accurate than Strachey's, and for the same reason his multiplication ratio is at least one which can be tried as a working formula.

<sup>21</sup> Smith's *Works*, Arber ed., p. 65. Swanton has used a similar multiplication ratio in computing total populations for the Southeast; "A close examination of the more reliable (Southeastern data) has led the writer to conclude that on an average two and a half warriors should be allowed to a cabin and one warrior to every three and a half of the population." *Indian Tribes of the Lower Mississippi Valley* (B.A.E. Bulletin 43, 1911), p. 43; cf. also Swanton's "Population of the Southeastern Tribes," *Early History of the Creek Indians*, 1922, pp. 421-456, in which a ratio of 1 to  $3\frac{1}{2}$  is consistently applied).

<sup>22</sup> Spellman's *Relation of Virginia*, c. 1611 (Arber, pp. ci-cxiv) contains no population information, but it is the most genuinely ethnological of all of the minor histories of the Jamestown settlement.

This was done by Jefferson, who included a section on "The Aborigines" in his *Notes on the State of Virginia*, 1781.<sup>23</sup> A part of this early ethnological essay was devoted to a consideration of the population of the Indian tribes of the Virginia tidewater area in 1607. Jefferson relied entirely upon Smith's data, for Strachey's *Historie* was unpublished at the time, and from them he computed about "2400 warriors . . . in the territories of the Powhatan confederacy south of the Potomac."<sup>24</sup> Jefferson accepted Smith's warrior to total population ratio and by its application computed "about 8000" native inhabitants at the time of English settlement. He pointed out that this was a native density of one person per square mile inhabited by the tribes of the confederacy.<sup>25</sup> P. A. Bruce, a competent and critical economic historian of colonial Virginia, likewise accepted Smith's estimates and his multiplication ratio and arrived at a similar figure for the total aboriginal population.<sup>26</sup>

It is possible, in view of the fact that the Virginia tribes were intermittently at war, both among themselves and with their hostile neighbors to the north and west, that Smith's ratio of adult men to total population is too high. However, this possibility is counteracted by the equal possibility that his estimate of the absolute size of the young adult male population is also too high. After his careful analysis of population data for native North America Kroeber put it down as one of his "methodological assumptions" that "the vast majority of figures by contemporaries are too large. . . . The problem is to know when the exaggeration is slight and when it is unreasonable."<sup>27</sup> I have already concluded that Strachey's estimates are "unreasonably" exaggerated, but that Smith's are only "slightly" so. I now suggest that Smith's slight exaggeration in absolute numbers of warriors is cancelled by the fact that he may have exaggerated likewise the proportion of warriors to total population. An application of his formula to his own data (a total of 2330 warriors for 29 of the 30 tribes of the tidewater area) would therefore cancel the two errors and gives a total of 7767 individuals in 1607. On the other hand, Smith's ratio applied to Strachey's data for 38 groups<sup>28</sup> gives an improbable total of 14,283.

Mooney's published estimates for the total population of the Powhatan

---

<sup>23</sup> *The Writings of Thomas Jefferson*, edited by P. L. Ford, New York, 1904, Vol. 3. Jefferson's *Notes* contained a map of Virginia which is a valuable supplement to Smith's map in the location of the Powhatan tribes.

<sup>24</sup> *Op. cit.*, p. 196. This is probably the earliest application of the term "Powhatan confederacy" to the tidewater tribes.

<sup>25</sup> The area of tidewater Virginia is 8011.14 square miles. I have discussed the boundaries of the Virginia Algonquin and shown that the distribution of the tribes of the confederacy was coterminous with the tidewater area in *The Anthropological Position of the Indian Tribes of Tidewater Virginia* (William and Mary College Quarterly, Vol. 23, No. 1. 1943), pp. 27-40.

<sup>26</sup> *Economic History of Virginia in the Seventeenth Century* (New York, 1895), Vol. I, pp. 140-144. <sup>27</sup> 1939, p. 180.

<sup>28</sup> Table I plus Strachey's additional "tribes" (no data for Pissasec; Chesapeake extinct according to Strachey; Accohannoc listed in both series).

confederacy varied from 8000 to 9000. In 1907 he offered "about 8500" as a "reasonable calculation," but in 1910 he accepted Jefferson's figure of "about 8000." Swanton points out that Mooney was apparently reducing his estimates of native populations as his study continued, but in his posthumously published monograph of 1928 Mooney's figure for the confederacy has risen to 9000. The lowest figure most accurately represents Smith's data and probably most nearly reflects the aboriginal situation at the time of contact. This figure effects approximately a 10 per cent reduction, which is the probable error that Kroeber suggests was incorporated in the best estimates of Mooney's *Aboriginal Population*.<sup>29</sup>

Mooney characterized Jefferson's enumeration of 30 tribes for the Powhatan confederacy as "approximate, but not exact." It would seem, however, that in this matter Jefferson came nearer the truth than Mooney did. Both Smith and Strachey described as "nations" or "kingdoms" and enumerated in detail the 30 tribes listed in Table I. Mooney's own lists,<sup>30</sup> which vary from 32 to 36, err on the side of exaggeration, due to his misinterpretation of certain "king's house" symbols on Smith's map, his general impression of the power of Powhatan's political organization, and the fact that he included certain "tribes" which Strachey clearly designated as the jurisdictions of "petty weroances" or sub-chiefs. Smith's map and Mooney's lists when corrected for errors by reference to contemporary textual materials show thirty tribes in the area of Virginia south of the Potomac and east of the fall line. Within this area the average population per tribe was 267.8, according to the data of Smith's *Map and Description*; 278.2 according to his *Generall Historie*; and an improbable 375.9 according to Strachey's figures.

The early authors of Virginia were told by their informants that most of Powhatan's tribes had been added to the confederacy as a result of his conquests. In a chapter describing native political organization Smith stated that "Some countries he hath, which have been his ancestors, and came unto him by inheritance, as the cuntry called Powhatan, Arrohateck, Appamatuke, Pamunke, Youghtanund, and Mattapanient. All the rest of his Terretories . . . they report have beene his severall conquests."<sup>31</sup> In a less clear statement he repeated the foregoing six tribes and added Chiskiatic and Werowocomoco to the "countries" that Powhatan had inherited from his predecessor.<sup>32</sup> Strachey

<sup>29</sup> Mooney, *The Powhatan Confederacy, Past and Present* (AMERICAN ANTHROPOLOGIST, Vol. 9, 1907), p. 130; *HAI*, II, 1910, p. 302; *Aboriginal Population*, 1928, p. 6; Kroeber, 1939, pp. 131-132.

<sup>30</sup> 1907, p. 134; *HAI*, II, p. 302. Speck's list of 26 tribes in the "Powhatan Group" of the Southeastern Algonkian omits the Accohanoc, Chiskiatic, Paspahugh, and Weanoc; these four occur, however, on his map of the area (*The Ethnic Position of the Southeastern Algonkian*, AMERICAN ANTHROPOLOGIST, Vol. 26, No. 2, 1924, pp. 187, 189).

<sup>31</sup> *Works*, Arber, pp. 79, 375.

<sup>32</sup> *Ibid.*, pp. 51-52, 347-348.

mentioned the six tribes of Smith's list (numbers 3, 4, 11, 16, 21, and 30 of Table I), adding that "all the rest . . . have been either by force subdued unto him, or through feare yielded."<sup>33</sup> There are accounts of Powhatan's conquests of the Chesapeake, Kecoughtan, and Piankatank tribes, and it is clear from the early narratives that the so-called Powhatan "confederacy" was an empire, rather than an alliance or confederacy, and that it was established by conquest within the memory of those natives with whom the Jamestown colonists first came into contact. Powhatan himself was still living at the time and was described as a "daring spirit, vigilant, ambitious (and), subtile to enlarge his dominions."

The tribal locations in Table I show that the original nucleus of the Powhatan confederacy was a compact block of tribes inhabiting the banks of the upper James, Pamunkey, and Mattaponi rivers. From this area in west-central Virginia Tidewater the confederacy was extended to the east, north, and south, until it included all the tribes from the south bank of the Potomac river to and including the tribes on the south side of the James. In addition, two tribes east of Chesapeake bay, the Accomac and Accohanoc, located on the southern tip of the Delmarvan peninsula, are described as speaking the language of mainland Virginia and paying tribute to Powhatan as members of his confederacy. The original political group had a population of from *c.* 1750 (Smith) to *c.* 1850 (Mooney), and from this the population of the confederacy was expanded to *c.* 8000 within the lifetime of Powhatan. By far the largest tribe of the original nucleus was the Pamunkey, and during the known history of the confederacy this tribe was its politically most powerful and leading member. Opechancanough, brother of Powhatan and his successor as chief of the confederacy, was the Pamunkey tribal chief at the time of his succession. This group took the leading part in the wars of the seventeenth century, both against the colonists and against native tribal enemies. As a consequence they were the heaviest sufferers of the century's hostilities, having only "about 50 bowmen or hunters"—a total population of not more than 200—according to a native census of 1669.<sup>34</sup>

An analysis of the population data for the Virginia Algonkian from the point of view of the geographical distribution of the tribes shows interesting results. The tribes have usually been located with reference to colonial settlements, modern towns, and county divisions. In this area, however, the dis-

---

<sup>33</sup> *Historie*, p. 49. In another context Strachey adds Chiskiack, Werowocomoco, and Orapaks to the original tribes (pp. 35-36). Orapaks was a favorite residence of Powhatan, but it was not a separate tribal capital.

<sup>34</sup> Virginia Assembly Census of "Indian Tributaries," in W. W. Hening, *The Statutes at Large . . . of All the Laws of Virginia*, Vol. 2, pp. 274-275. Also Mooney, 1907, pp. 147-148; HAI, II, pp. 197-199; Speck, *Chapters on the Ethnology of the Powhatan Tribes of Virginia* (Indian Notes and Monographs, Vol. 1, No. 5, 1928), pp. 237-253, 286, 301-312.



tribution of tribal territories according to the river valleys inhabited is ecologically and politically a more significant indication of the aboriginal situation. Fortunately, attempts to reconstruct the early seventeenth century tribal geography of Virginia are facilitated considerably by two contemporary maps, both of which show the location of the principal towns of the tidewater tribes—Tindall's map of 1608 and Smith's map of 1612.<sup>35</sup> These maps were constructed independently of each other, yet they agree essentially in their native locations and are in concordance with the geographical information of contemporary historical narratives. Their tribal locations may therefore be assumed to be approximately correct. Smith's map is geographically so accurate that its locations can be transferred to modern maps without particular difficulty.<sup>36</sup> Both maps are rich in ethno-geographical information, and they show the tribes of Algonkian Virginia to have been distributed as indicated in Table II.

The table shows the extent to which the population of tidewater Virginia was concentrated north of the Rappahannock river and south of the James. The total population of the confederacy was *c.* 8000, with 400 inhabitants living on the Eastern Shore. Of the 7600 inhabitants of mainland Virginia, nearly 4200, or approximately 55 per cent, lived in what Virginia historians call the "Northern Neck" and "Southside" Virginia. Yet Powhatan's original and most loyal tribes inhabited the western part of the area between the James and Rappahannock rivers. His favorite residences were at Werowocomoco and Orapaks, both of which were in this area, and the Pamunkey, the strongest tribe of the confederacy, lived in the center of this section. The territorial distribution shows that more than half of the Virginia Algonkian, though acknowledging Powhatan's jurisdiction by paying tribute to him, lived a convenient distance from the threat of his power. We know that the more removed tribes of the Potomac river and the Eastern Shore carried on their affairs more independently of Powhatan than the more southern groups, for there are records of the chiefs of the Potomac and Accomac tribes disobeying the commands of Powhatan and of his successor Opechancanough. The Rappahannock river seems to have been chosen as a natural geographical line of protection. Smith's map shows 5 tribes and 35 native settlements on its northern bank, but only 2 tribes and 7 settlements on its southern side. In Southside Virginia also there are indications that the Nansemond and Chesapeake, the eastern-

---

<sup>35</sup> Smith published his map in 1612 and again in 1625. It has been reproduced frequently (*e.g.*, by Arber, 1884, facing p. 384). Tindall's manuscript map was not published until 1925 (reduced facsimile in *Proceedings, Massachusetts Historical Society*, Vol. 58, opp. p. 244). I have reproduced Tindall's map and discussed the ethnological significance of Tindall's and Smith's maps in the *William and Mary College Quarterly*, Vol. 23, No. 4, 1943, pp. 371-408.

<sup>36</sup> For topographers' evaluations of the accuracy of Smith's map, see E. B. Mathews, *The Maps and Map Makers of Maryland* (Baltimore, 1908); R. R. Lukens, *Captain John Smith's Map* (The Military Engineer, Vol. 23, No. 131, 1931), pp. 435-438; K. W. Trimble, *ibid.*, p. 439.

TABLE II

<i>Tidewater Peninsular Population</i>	<i>The Tidal Rivers and Their Tribes</i>	<i>Population by River Banks</i>	
	South bank of Potomac river	Tauxnent (40) Potomac (160) *Onawmanient (100) *Secacawoni (30) *Wicocomico (130)	1533
		The Northern Neck (2568)	North bank of Rappahannock river
The Middle Peninsula (1966)	South bank of Rappahannock, including Piankatank river		
		North bank of York river, in- cluding Mattaponi river	Youghtanund (30) Mattaponi (30) Pamunkey (300) *Werowocomoco (40)
The Virginia Peninsula (1517)	South bank of York river, in- cluding Pamunkey river		Youghtanund (30) *Chiskiatic (45)
		North bank of James river, in- cluding Chickahominy river	Powhatan (40) Arrohattoc (30) Weanoc (50) Chickahominy (200) Paspahagh (40) *Kecoughtan (20)
"Southside" Virginia (1583)	South bank of James river		Appomattoc (60) Weanoc (50) Quiyoughcohannock (25) *Warraskoyack (40) *Nansemond (200) *Chesapeake (100)
Eastern Shore (400)	East of Chesapeake bay	Accomac (80) Accohanoc (40)	400

*NOTE:* Tribes are listed in the order of their location from west to east, *i.e.*, from the fall line of the rivers to Chesapeake bay. Figures in parentheses after the tribal names are Smith's estimates of warriors for each tribe. Total populations for each peninsula and river bank are computed from Smith's data and with his multiplication ratio. The Youghtanund and Weanoc lived on both banks of the rivers indicated. In computing their population one-half of the inhabitants of each tribe was allotted to either side of the river. The Pissasec, for whom Smith gave no population estimate, are accorded *c.* 270 inhabitants—the average size of the Powhatan tribes. Those tribes designated with an asterisk are discussed below, p. 202.

most tribes, similarly conducted themselves somewhat independently of the "emperor." The Nansemond were large enough to do so, and with both tribes doubtless distance made some difference.

Within the area of "The Peninsula" and the "Middle Peninsula" (between the Rappahannock and James rivers) there was a cleavage in the native population distribution between the eastern and western portions. Tindall's map shows but three and Smith's but four tribes located in the eastern portion of this region. The four tribes were the Chiskiack, Kecoughtan, Piankatank, and Werowocomoco, which, with a combined population of less than 500 inhabitants, constituted but about one-seventh of the total population between the Rappahannock and the James. The remaining six-sevenths lived west of a line drawn from Jamestown north to present West Point. The latter location, at the confluence of the Pamunkey and Mattaponi rivers, marks the eastern edge of Pamunkey territory and likewise the eastern edge of the tribal territories which formed the original nucleus of the confederacy. That the eastern portion of middle Tidewater Virginia was more thinly populated by the natives than the western portion is also attested by contemporary semi-ethnological accounts, and it is unlikely that the early writers were seriously mistaken in their observations of the lack of inhabitants in this area, for no part of the Virginia colony was more completely explored during the period of early settlement.

The disproportionate population distribution of eastern and western Tidewater is considerably reduced when the areas of the Northern Neck and Southside Virginia are included in the computation, but the figures for total Tidewater, as well as those for its middle portion, support the suggestion that among coastal populations, although tidewater, and lowland regions are more densely populated than adjoining inland areas, the lower courses of tidal rivers are not necessarily more densely peopled than the upper courses of those rivers. A line drawn from Jamestown on the James river through a point just east of West Point on the York and continued north to the area of Nomini bay on the Potomac river does not divide Virginia Tidewater into two equal eastern and western areas, but it does mark a geographical line of separation between lower and upper river tribes according to tribal locations in so far as they can be transferred to modern maps from early cartographic and historic ethnographic sources. The area east of this line includes the territories of those tribes marked with an asterisk in Table II. These thirteen tribes had a total population of less than 3200 inhabitants, or about 42 per cent of the inhabitants of mainland Virginia Tidewater. Even adding the 400 inhabitants of Eastern Shore Virginia would give lower river tribes but 47 per cent of the population of the entire confederacy.

There may be no clear ecological reason why tidal rivers should be less populated at their mouths than nearer the fall line, but there is the possibility

that as an adjacent physiographic area of different characteristics is approached the transitional zone carries more varied resources for the subsistence requirements of larger populations. Kroeber reminds us that river tributaries may answer native subsistence problems "about as well as a main stream,"<sup>37</sup> and the principal tributaries of the tidal rivers of Virginia are at the upper courses of those rivers. The three largest tribes of Virginia—the Pamunkey, Chickahominy, and Nansemond—lived on tributaries of the James and York rivers, and two of these three were in the western portion of the tidewater area. In discussing the distribution of population in the Southeastern area as a whole Swanton has called attention to the tendency of the native tribes of the eastern part of the area to accumulate along the fall line, as modern cities later did, and concludes that with the aborigines the attraction was food, just as with us it was power.<sup>38</sup> He claims that favored fishing places are likely to be near the falls,<sup>39</sup> but such was not the case in Virginia, where the river oysterbanks were nearer the Bay and where the salt water fish were more likely to be secured in the lower courses of the tidal estuaries. In as much as Swanton's reference to the accumulation of tribes near the falls is in a context which discusses the distribution of population, the implication is that population as well as tribes was concentrated in the fall-line area. However, his map<sup>40</sup> shows that fall-line tribes were generally smaller ones and there is no indication of the extent to which population concentrated at the falls, for his analysis is in terms of the size of tribes rather than their density of population distribution per unit of area inhabited. Within the Virginia Algonkian area those tribes located at or near the falls of the rivers were small groups, and the Siouan tribes of the Piedmont are described as located a distance of several days' journey from their Algonkian enemies of the tidewater area. Although there was a concentration of the Algonkian population in the western part of the Powhatan area, the greater part of this population lived some distance east of the fall line.

The explanation of population distribution in Virginia is not, therefore, entirely ecological. Historical rather than physical environmental factors seem more pertinent in an explanatory hypothesis. Among extra-environmental forces Swanton has suggested that in some parts of the Southeast the introduction of agriculture had effected a population shift from shore-line to inland areas in the late pre-contact period.<sup>41</sup> However, he hypothesizes a movement from the coast and important inland waterways to the interior, which is not the type of movement that occurred in Virginia, the total area of which is well-watered with large and numerous streams. At the same time there are

<sup>37</sup> 1939, p. 176.

<sup>38</sup> *The Southeastern Indians of History* (Conference on Southern Prehistory, 1932), p. 14.

<sup>39</sup> *Notes on the Cultural Province of the Southeast* (AMERICAN ANTHROPOLOGIST, Vol. 37, No. 3, 1935), p. 376.

<sup>40</sup> 1932, Appendix, Fig. 2.

<sup>41</sup> 1935, pp. 375-378.

facts which suggest that the larger population of the western coastal plain of Virginia was the result of a shift in population which had occurred but a short period before the beginning of English settlement. The expansion of Powhatan's empire was largely at the expense of eastern tribes, for the western groups, with the single exception of the Chickahominy, were originally friendly. Strachey claims that the Chesapeake, on the south shore of the Bay, were exterminated by conquest, and the Kecoughtan, at the mouth of the James river, who were given a population of but 20 or 30 warriors in Smith's time, are represented as having been reduced from a former population of 1000.<sup>42</sup> An additional factor involved in the shift of the aboriginal population from eastern to western Tidewater was the presence of the English in the eastern part of the area. Shortly after the establishment of the Jamestown colony Powhatan changed his residence from Werowocomoco on the York river to Orapaks at the headwaters of the Chickahominy. It is impossible to suppose that subjects did not follow him for their greater safety as well as his. Smith failed to give a population estimate for Orapaks in 1607, but after Powhatan's removal to the town Strachey accorded it a population of 50 warriors, or from 150 to 200 inhabitants.<sup>43</sup> The western movement of tidewater population in Virginia was thus a phenomenon of the late pre-contact and early contact period, and the resultant distribution of population was a result of historical rather than physical environmental causes.

Powhatan's conquests in the east and the later pressure of the earliest English settlements on the lower courses of the rivers account for the native distribution of population between the Rappahannock and the James. These factors did not apply to so great an extent north of the Rappahannock and they operated with different results south of the James. In the north there were no early English settlements and there was no native movement, whereas in the south the tribes fled farther south to escape the encroachments of the colonists. The southward shift was brought about largely in the third and fifth decades of the century, when the tribes south of the James fled to the area of the Carolina frontier in order to escape the reprisals they feared from the English following the Indian massacres of 1622 and 1644. This transplantation of Virginia tribes is documented for the Weanoc and Nansemond, both of whom by the end of the century were living in the territories of their Iroquoian-speaking southern neighbors.<sup>44</sup> Other Southside tribes probably experienced a similar removal.

A final factor accounting for the distribution of the Algonkian tribes of Virginia was the presence on their west of the hostile and aggressive Siouan

<sup>42</sup> Strachey, *Historie*, pp. 60-61.      <sup>43</sup> *Ibid.*, pp. 49, 62.

<sup>44</sup> *Calendar of Virginia State Papers* (Vol. 1, 1652-1781), p. 65; Hening's *Statutes*, Vol. 5, pp. 270-273; Depositions of Ludwell and Harrison, Virginia-Carolina Boundary Line Commissioners, *The Virginia Magazine of History and Biography* (Vol. 4, No. 1, 1896), pp. 36-49; (Vol. 5, No. 1, 1897), pp. 47-50; (Vol. 7, No. 4, 1900), pp. 342, 349-352.

tribes of the Piedmont. These were also grouped into what students have called "confederacies," although so little is known of the culture of these tribes that it is impossible to describe the nature of their political organization. Contemporary sources refer to the Monacan group as living on the James river and its tributaries above the falls and the Manahoac as occupying a corresponding position on the upper Rappahannock river.<sup>45</sup> Early sources are unanimous in speaking of the Siouan tribes as enemies of the Algonkian and they seem to have been the more aggressive of the two groups. There are no accounts of the tidewater tribes invading Siouan territory, but Powhatan told the colonists in 1607 that the Monacan "came Downe at the fall of the leafe and invaded his Countrye."<sup>46</sup> To the north on the Rappahannock river there were no Algonkian towns on either bank for a distance of ten or twelve miles below the fall line, although the lower river was thickly settled on its northern bank. This distribution of settlements was probably due, as Bushnell has suggested, to the pressure of the hostile Manahoac of the piedmont province.<sup>47</sup> Excepting for this short strip of uninhabited territory below the falls at present Fredericksburg the fall line of the rivers separating the piedmont and tidewater physiographic areas also separated the territory of the Siouan-speaking Monacan and Manahoac tribes from that of the Algonkian of the coastal plain. This is one of the clearest coincidences of physiographic and native culture areal boundaries that can be found in North America.<sup>48</sup>

The division of the general area of eastern Virginia and Carolina into cultural sub-areas is suggested by linguistic and physiographic distinctions. Apart from the Powhatan area of Virginia and possibly the Algonkian area of eastern Carolina, however, so little is known of the aboriginal way of life that the sub-areal cultural differentiations are specializations to be expected rather than facts which can be verified. Certain regional distinctions and affiliations have been tentatively suggested. Both Speck and Swanton have designated Algonkian Virginia and Carolina as a cultural sub-area of the Southeast and Speck has intimated that cultural differences between the "Powhatan group" and the "Carolina group" may have been sufficient to mark them off as sub-areas of the Southeastern Algonkian.<sup>49</sup> Kroeber, who includes less territory and

---

<sup>45</sup> D. I. Bushnell, Jr., *The Five Monacan Towns in Virginia, 1607* (Smithsonian Miscellaneous Collections, Vol. 82, No. 12, Washington, 1930), and *The Manahoac Tribes in Virginia, 1608* (*ibid.*, Vol. 94, No. 8, 1935); J. Mooney, *Siouan Tribes of the East* (Bureau of American Ethnology, Bulletin 22, Washington, 1894).

<sup>46</sup> Archer's *Relation of the Discovery of our River from James Forte into the Maine* (in Smith's *Works*, Arber ed., 1884), p. xlvi.

<sup>47</sup> *Indian Sites Below the Falls of the Rappahannock, Virginia* (Smithsonian Miscellaneous Collections, Vol. 96, No. 4, Washington, 1937), pp. 1, 16; maps, pp. 3, 17.

<sup>48</sup> Kroeber, 1939, pp. 183, 201.

<sup>49</sup> Speck, *The Ethnic Position of the Southeastern Algonkian* (AMERICAN ANTHROPOLOGIST, Vol. 26, No. 2, 1924), pp. 184-200; Swanton, *Aboriginal Culture of the Southeast* (Forty-second Annual Report of the Bureau of American Ethnology, Washington, 1928), pp. 713-714, 718.

fewer tribes in the Southeast than Speck or Swanton, provides a "South Atlantic Slope" area divided into four sub-areas: (a) South Atlantic Piedmont, (b) South Atlantic Lowland, (c) Carolina Sound, and (d) Virginia Tidewater.<sup>50</sup> His culture area map (Map 6) represents the boundaries between (a) and (b) and between (c) and (d) as "doubtful," whereas that between a-b and c-d is not so designated. Sub-areas (a) and (b) differ from (c) and (d) both linguistically and in physiographic habitat, whereas (b) is both Siouan and Iroquoian and (c) and (d) are both Algonkian. The classification would seem, therefore, to be essentially physiographically determined, for languages cut across the suggested divisions and Kroeber acknowledges that "too little is known of the culture to press the validity of the subareas."

Nonetheless, the areas show interesting population differences, and in as much as population differentials may have cultural implications, it is interesting to compare the Powhatan tribes with their neighbors to the north, south, and west. In Table III the population estimates are from Mooney, and the areas of tribal territories have been computed from Kroeber's figures.<sup>51</sup> The classification into tribal groups is somewhat different from that of either of these authors.

TABLE III

<i>Tribal Group</i>	<i>Population</i>	<i>Area in 100 km<sup>2</sup></i>	<i>Density per<sup>52</sup> 100 km<sup>2</sup></i>
1. Delaware	8000	454	17.62
2. Algonkian of Maryland and Delaware			
Conoy (or Piscataway)	2000	323	14.55
Tocwogh and Ozinies	700		
Nanticoke	1600		
Wicomoco	400		
3. Powhatan Confederacy	9000 <sup>53</sup>	234	38.46
4. Carolina Algonkian			
Weapemeoc	800	5000	32.26
Chowanoc	1500		
Secotan	1200		
Pomouik	1000		
Neusiok	500		
5. Eastern Siouan (Virginia)			
Monacan Confederacy	1200	2700	8.68
Monahoac Confederacy	1500		
6. Eastern Siouan (Carolina) (including Catawba)	17500	1561	11.21
7. Southern Iroquoian (excepting Cherokee)			
Nottoway	1500	7000	37.38 <sup>54</sup>
Meherrin	700		
Tuscarora <sup>55</sup>	5000		
Coree	500		
Total for "South Atlantic Slope" area (Groups 3-7)	41900	2467	16.98

It is probable that corrections in the foregoing table would not materially change the comparative results in population densities, except that the figure for the Southern Iroquoian tribes would be reduced if the Tuscarora population estimate is too large and its territory too small. Mooney's figure of 9000 for the Powhatan confederacy has not been reduced to 8000 to make it conform to the figures derived from Smith's data, in as much as his estimates for the adjoining areas are probably relatively as generous as they are for tidewater Virginia. As the figures stand the Powhatan area was the most densely inhabited, with the Carolina Algonkian and Iroquoian the only groups approximating the density of the Algonkian Virginians. These differences in tribal size and areal density are in concordance with such cultural differences as are suggested by the ethnographic data that are available for the general region. The greater density of the Powhatan group in particular conforms with its somewhat more specialized economy<sup>56</sup> and with its generally more complex cultural development. In a suggestive analysis of "intensity" of native cultural development in the New World Kroeber proposes a scale of cultural grades or levels from 1 to 7, with the Maya designated 7 and tribes of southern Texas, the Great Basin, and interior tundra Canada allotted a grade of 1.<sup>57</sup> In this scale of values the tribes of the general region of Virginia-Carolina Tidewater

---

<sup>50</sup> *Op. cit.*, pp. 92-94. In his text Kroeber treats the South Atlantic Lowland and the South Atlantic Piedmont as a single section. His intended tribal allocations by sub-areas can be determined by superimposing his Map 1B upon Map 6.

<sup>51</sup> Mooney, 1928, pp. 4-6; Kroeber, 1939, 140-141.

<sup>52</sup> 100 km<sup>2</sup> = 38.51 square miles. Kroeber's areas are in 100 square kilometer units because calculated by the use of a planimeter and checked by counting the squares on transparent metrically ruled paper which was superimposed upon a base map of tribal territories. Mathematical refinements do not, of course, correct original misdeterminations of tribal territorial extent; Kroeber, therefore, presents his data as approximations subject to the correction of local specialists.

<sup>53</sup> Not corrected to 8000 on the assumption that Mooney's other estimates are incorrect to the same extent and in the same direction as his Powhatan figure.

<sup>54</sup> Probably too large. Kroeber includes the territory of the Moheton or Moneton, for whom no population data are available (Mooney, *HAI*, I, p. 927; Swanton, in Mooney, 1928, p. 6 n.; Swanton, 1932, Map 2).

<sup>55</sup> Mooney's estimate of 5000 for the Iroquoian Tuscarora seems too high; he gives the five tribes of the classic Iroquois confederacy but 5500. Lawson assigned the Tuscarora 15 towns and 1200 warriors in 1708 (*History of Carolina*, 1714; Richmond reprint, 1937, p. 255), *i.e.*, a total population of *c.* 4000-4200. Kroeber's estimate of the territory of the Tuscarora is probably too small (compare his Map 1B with Swanton, 1932, Appendix, Map 1). Both corrections in the table would decrease the population density of the Southern Iroquoian group.

<sup>56</sup> P. A. Bruce described native Virginian economy in *Economic History of Virginia in the Seventeenth Century* (Macmillan, 1895, 2 vols.), Vol. 1, ch. 3. The chapter is a discerning discussion, based upon a judicious use of contemporary materials.

<sup>57</sup> 1939, pp. 222 ff.; Map 28, opp. p. 222.



and Piedmont are graded 3, with the tribes of the Powhatan confederacy 3+. Evaluations such as these can not be checked by objective criteria, but no one is better equipped to make them than Kroeber, and students of eastern states ethnology would probably agree with his judgment. It is suggested by what is known of the cultures in the area and it is supported by the population differentials shown by Table III.

The relations between physiography, population, and the known culture of this area seem to support the interpretive principles which Kroeber derived from his study of the continent, *viz.*, (a) that a denser population is correlated with a richer ecology, (b) that agriculture alone does not necessarily increase population density, which is related to the size of the area of fertile soil and the extent to which it is exploited, (c) that coastal areas are more densely peopled than adjacent inland areas,<sup>58</sup> and (d) that within the same general cultural province "other things being equal, a higher, richer, or more complex culture is a reasonable index of greater population density." The validity of the last principle and its applicability to the marginal region between the Coastal Algonkian and the Southeast can be tested by further study of the cultural differences between the sub-areas suggested in the foregoing analysis. While little is known of the cultures of the seventeenth-century Siouan and Iroquoian speaking people of the Southeast, contemporary historical sources for the Southeastern Algonkian are richer in ethnological materials than is generally supposed. If properly collected and collated, they would probably be sufficient to test the sub-areal cultural differences suggested by physiographic data and population differentials. This task of testing will be made an object of future research.

THE AMERICAN UNIVERSITY  
WASHINGTON, D. C.

---

<sup>58</sup> Swanton ranked the physical divisions of the Southeast in the following order with respect to the size of tribes: the southern Appalachians (Cherokee), the inland section of the coastal plain, the coast itself, and the Piedmont plateau (1932, p. 14; Appendix, Map 2). His analysis was in terms of total tribal populations rather than density of distribution. Ranking in terms of density would place the Cherokee down in the list; Kroeber computes their density as 16.30 per 100 km<sup>2</sup> (1939, p. 141).