

Concerning the origin and occurrence of
gold, platinum, and diamonds in the
United States,
by
R. M. Patterson (1850)

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R. W. Kopf (translator)

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Concerning the origin and occurrence of gold, platinum,
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A glossary of names, a table of diamond finds mentioned in the text, and two maps showing location of the finds, were added by me. I thank the following for helping translate: my mother, Anna M. Kopf, Mrs. Ursula Burgess, Menlo Atherton High School, and William Sanders, Librarian, U. S. Geological Survey, Menlo Park, Calif.

^{1/} Patterson, R. M., 1850, Über die Beschaffenheit und das Vorkommen des Goldes, Platins und der Diamanten in den Vereinigten Staaten: Zeitschrift der deutschen geologischen Gesellschaft, v. 2, p. 60-64.

GLOSSARY

<u>American Journal of Science</u>	63
Beale, Lt.	60
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Virginia	60
Spottsylvania Co. <u>NE Va.</u>	60

Table 1. Tabulation of diamond finds noted in Patterson's article as having been found in the United States prior to 1850, the date of this publication.

Designation	Page	Origin	Color	Weight	Spec. gravity	Remarks
A	62	Hall Co., /NE/ Ga.	Very clear	6.8 Troy grains = 2 1/8 carats	3.51	Found by a gold washer. Sent to Philadelphia by Mr. F. Cooper, of Dahlonga, N. Ga. In possession of Mr. Isaah Phillips, gemologist. Has characteristic curved crystal faces. Seen by Mr. Patterson.
B	62	Ga.	?	?	?	Sent to England, identified as a diamond. Find reported by Mr. F. Cooper.
C	62	Ga.	?	3 carats	?	Find reported by Mr. F. Cooper. Brought to Philadelphia. In possession of Isaah Phillips.
D	62	Ga?	?	9 grains	?	Brought to Philadelphia mint in 1846.
E	62	Ga?	?	6 grains	?	Brought to Phila. mint shortly before 1850.
F	62	Ga?	?	6 grains	?	Brought to Phila. mint shortly before 1850.
G	62	N. C.	?	1 1/2 carats	?	First diamond found in U. S. Brought to Phila. by Mr. Thomas G. Clemens in 1836. Examined by Isaac Phillips; resembles diamond A. Description pub. by Feuchtwanger.
H	62	N. C.	?	2 1/2 grains	?	Examined by Isaac Phillips in 1842. Resembles diamond G.
I	62	Buncombe Co., /W/ N. C.	?	?	?	Mentioned by /C. U./ Shepard of Scientific Soc. of N. Y. Valued about \$35.
J	62-63	/El Dorado Co./ Calif.	Straw yellow	?	?	Quotes note in Amer. Jour. Sci. (1949, v. 8, p. 294) which credits Mr. Lyman with having seen a pea-sized straw yellow diamond.

(The following notes were taken from a letter sent by the Director of the Mint in Philadelphia, Mr. R.M. Patterson, to the Secretary of State of the United States in Washington, Mr. J.M. Clayton, at the request of the Minister of the United States, Mr. A. Hannegan, in order to obtain information instigated by Mr. Al. von Humboldt concerning the above matter. This information was submitted to the editor of this journal.)

The largest piece of gold discovered in the United States was found in Cabarrus County, North Carolina. It was located not too far beneath the surface of the earth and was discovered by a black person. In its native state it weighed 28 pounds avoirdupois. The clump was melted down and poured into bars. Most likely this is the same piece that was brought to the Mint in May of 1824 and was the first piece at the Mint brought there from the United States. Its value was \$4,850. In all probability this is the piece of gold mentioned by Baron Humboldt even though this one was said to have been found in adjacent Anson County and much heavier.

The largest piece ever received by the Mint from Georgia weighed 35½ oz. Troy, worth \$700. The Mint possesses a gold mass found in Spottsylvania, Virginia, and which weighs 25-3/8 oz. Troy and its value is estimated at \$460. The largest piece of gold found in California was brought here by Lt. Beale and weighed 80.98 oz. Troy, was .921 fine, and was estimated at \$1,499.

and 80 cents after its various impurities had been extracted. This clump was stored exactly as it was found.

In a letter directed by Dr. J. W. Farnum of California to the assayer of the Mint, an even larger lump of gold was mentioned. He said: "The largest piece which I have yet seen weighed 15 pounds (180 Troy ounces?). But since it includes a good-sized rock mass, I therefore believe that its value should be reckoned to be only \$2,000, even though the British consul paid \$4,000 for it."

Concerning platinum, we have no proof at all that this metal was found in the gold sands of the Atlantic States, but it certainly occurs in the gold sands of California. It can be seen with the naked eye in the gold dust and occurs besides that in the normal occurrence of osmium-iridium and so forth. Our source states in a memo to me: "We have not yet decided on the amount of this metal to be used in the minting of gold pieces. By its known unchangability, it hardly mixes with gold when melted but it can be found after smelting in its characteristic form to be spread out on the upper surface on the bars of gold. The small amount that mixes with the gold is so little that it almost cannot be weighed and it does not diminish the value of the other metal [gold] when used as coins or other technical purposes. on the whole it seems to occur in very small amounts and it does not seem to be worth the effort of looking for it."

The theory of Baron von Humboldt, who long ago claimed that diamonds can be found with placer gold of the southern Alleghanies, has now been verified through the discovery of a few diamonds in this region. The first diamond which ever got into my hands was sent to me from Dahlonga [Lumpkin Co., N. Georgia] by Mr. F. Cooper, superintendent of the lower mint. It

* Theory of the origin of rocks.

was found in Hall County, Georgia, by a worker while washing gold gravel. It weighed 6.8 Troy grains or 2-1/8 carats. Its specific gravity is 3.51. It was completely crystallized but with the characteristic curved surfaces, at the same time without impurities and very clear, and would certainly, after being cut and polished, appear to be of the first water. Mr. Cooper adds that in the same two other diamonds had been found, one of which had allegedly been sent to England where it was found to have been a genuine diamond. Another diamond of 3 carats, probably the other of the two, was brought to Philadelphia and is now, together with the 2-1/8 carat diamond in the possession of Mr. Isaac Phillips, a great expert on precious stones. A diamond of 9 grains was brought to the Mint in 1846; two others which arrived recently in Philadelphia weighed 6 grains each. But probably there must have been others found which I have not seen.

Diamonds have also been found in the gold regions of North Carolina. One of these was brought here [Philadelphia?] by Thomas G. Clemsen in 1836. This was the first diamond found in the United States. According to the book about precious stones by Feuchtwanger, the diamond weighed 1 1/2 carats. Mr. Isaac Phillips saw it and states that it has great similarity with the first one from Georgia. Another diamond from North Carolina was seen by Mr. Phillips in 1842. It weighed 2 1/2 grains and was similar to the first one in appearance and value. In the year 1845, Prof. [C.V.] Shepard of the Scientific Society of New York mentions a diamond which was found in Buncombe County; its weight was not stated but its price was estimated at \$35.

We have seen no diamonds from California, despite rumors of their presence which are often mentioned. In the last number of

Silliman's Journal (September 1849 [v. 8, p. 294]) the publishers say: We learn from a reliable source that diamonds occur in California. The writer, Mr. Lyman, says that he has seen a crystal of straw yellow color which had the characteristic curved faces and the size of a pea. He saw it only a moment and had no opportunity to examine it closer but the appearance and shape left little doubt that it was a real diamond.

The enclosed printed matter taken from the "Manual of Coins", edited by Eckfeldt and Du Bois, shows the average content of the washed gold in the United States. It was noted that washed gold differs in its purity, depending on the surroundings from which it comes. For instance, washed gold from Georgia would show a purity of 980-990 thousandths, while gold from parts only a few miles away showed a purity of 830. The difference is even greater in North Carolina where the gold showed a purity of 580-980. The average gold content of the gold from North Carolina which was sent to the Mint in Charlotte contained 1839, 841 and 1840, 844 parts per thousand.

Gold from South Carolina, generally speaking, is finer and deviates little. Contents of fine gold rarely falls below 900 but reaches 900, the average purity being 925.

Gold from Georgia differs greatly but, on the average, its purity is greater than that of the above states. It drops sometimes as low as 820 and climbs as high as 995 which is the highest ever found in gold. The content may be set on the average at 950.

Gold from Virginia will vary seldom be brought to the Mint in the form of dust and can, therefore, not be considered here.

Occasionally gold is found in Alabama and Tennessee, its contents being equal to that found in Georgia.

Mr. Patterson adds in a letter (dated October 4, 1849) that only for the past ten months has gold been brought to the Mint from California with a total value of 3-1/2 million dollars.

Based on news dated February 15, 1849, received by von Humboldt and sent to him by Mr. von Gerolt, the greatest portion of the California gold was coined at the Mint in California and had a value of approximately 8 million dollars, indicating the vast rise of the gold value. Yet there is no comparison between the California gold exploitation and that of Russia. Even if the hard-to-determine quantities of gold that was taken out of California and shipped to England and France or to the Mexican or South American ports be added to the California gold, the Russian exploitation also would have to be included with the enormous quantities of secret exploitations.