

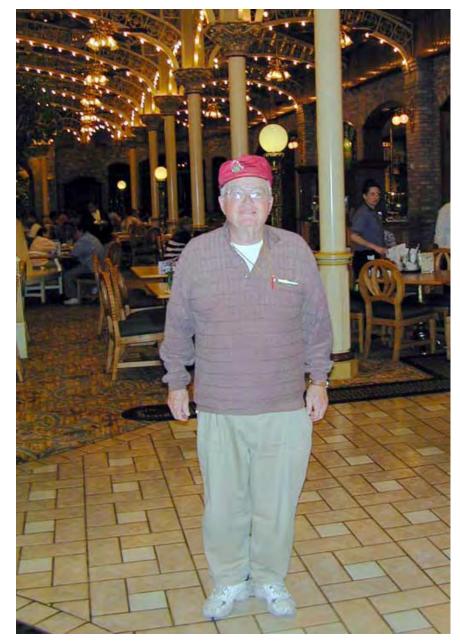
Copyright 2003 © Robert E. Joyce All Rights Reserved. Second Printing December 2003



Rob Joyce Rare Coins PO Box 55 Odenton, MD 21113

Dedication

This book is dedicated in memory of Jim Hart 1931-2003



Jim's enthusiasm, collaboration and great coin hunting skills kept this project advancing. He will be missed by the Morgan silver dollar collecting community.

- 3

Table of Contents:

Introduction	6
Definitions	9
Attribution Aid	14
VAM-1A "TRU_T" Top 100	19
VAM-1B1 "Capped R" Hot-50	20
VAM-1B2 "Capped R, No E in We" Hot-50	23
VAM-1D "Die Break in Denticles"	24
VAM-1E "Die Break Thru Star"	26
VAM-1F "Die Break M"	27
VAM-1G "Die Break Second S Of STATES"	28
VAM-1H "Spider Web Stars"	29
VAM-1i "Die Break N"	
VAM-1J "Die Break A"	31
VAM-1K "Die Break 5th Left Star"	33
VAM-1L "Die Break AM"	34
VAM-1M "Horned O in OF + Break at top of S"	35
VAM-1N "Unicorn D"	37
VAM-10 "Die Break A"	39
VAM-1P "Die Break E R"	40
VAM-1Q "Pompadour T - Die Break T Top"	43
VAM-1R "Die Break T Left"	45
VAM-1S "Die Gouge ED of UNITED"	47
VAM-1T "Die Break E Left"	48
VAM-1U "Die Gouge E & Wreath Bow"	49
VAM-1V "Die Break O"	50
VAM-1W "Die Break Between B-U"	51
VAM-1X "Rim Cud at E-P"	52
VAM-1Z "No E in We"	54
VAM-1AA "Die Gouge E"	56
VAM-1AB "Pierced Tail Feathers"	18
VAM-1AC "Filled R of Trust (T_UST)"	59
VAM-1AD "Beanie S"	60
VAM-1AE "Die Break Top Inside 2 nd S"	61
VAM-1AF "Die Gouge D in DOLLAR"	62

VAM-1AG "Die Break 3rd Left Enlarged Star"	63
VAM-1AH "Die Break 1st S in STATES to Rim"	65
VAM-1AI "In God We rust #2"	67
VAM-1AJ "Die Scratch Between O-F"	68
VAM-1AK "Vertical Die Gouge E of ONE"	69
VAM-1AL "Die Gouge NE of ONE"	70
VAM-2A "Doubled Date, Die Gouge In O"	88
VAM-2B "Doubled Date, Die Break M"	90
VAM-3A "Wing Break, Dot Next To Wing"	92
VAM-5A "Die Break ES"	94
VAM-7 "Doubled Ear, Left Stars + UNITED STATES"	97
VAM-8A "Flag R"	98
VAM-8B "Gouged Wreath"	100
VAM-9 "Doubled Date, Tripled Left Stars"	102
VAM-9A "In God We rust – Filled Die"	103
VAM-11A "Missing We in Motto"	104
VAM-12A "Wreath Break"	105
IOH Numbers	108
JOH-2 "Stretched Star- 3rd Left Star"	Error! Bookmark not defined
JOH-3 "Die Break O of ONE"	109
VAM-1AR "Die Break Top Left of M Extending Left"	76
JOH-8 "Die Break 2 of 1921"	111
JOH-9 "Die Cracks Above A in STATES"	112
JOH-10 "Die Cracks Above A in STATES #2"	71
JOH-11 "Die Cracks Reverse ED of UNITED"	113
JOH-12 "In God We ust"	114
JOH-13 "Die cracks Above A in STATES, Liberty's Cap"	115
JOH-14 "Die Break Neck"	116
JOH-15 "Sm. Breaks 6th Right Star, D UNITED"	118
JOH-16 "Bean-Bottom S"	119
JOH-17 "Weak God"	120
JOH-18 "Die Break 1 in Date"	121
Die Break Line Drawings	127
Value Information	154
New Finds	155
Acknowledgements	
	5

Introduction

This reference work is intended to help collectors in the hunt for unique die varieties of 1921 silver dollars produced at the Denver mint. The volume and velocity at which the Denver mint created these dollars resulted in numerous variations that are highly collectable and readily available for those willing to pursue them. This reference does not cover double die varieties, only production varieties including die breaks, die gouges and filled dies. Dollars produced at the Denver facility in 1921 have an unusually large number of these production varieties. The dies were frequently used until some major break or gouge occurred.

The Morgan, or Liberty Head silver dollar, was produced continuously for twentyseven years (from 1878 through 1904 and again for a single year in 1921). At almost an inch and a half across and just under an ounce in weight, the Morgan silver dollar is one of the most impressive coins to have circulated in the U.S. The classic Liberty Head obverse with an Eagle reverse often conjures romantic images of the old west with the media portraying them as the coin of choice in the wild saloons. The Morgan can arguably be considered the epitome of the American silver dollar.

The Philadelphia and San Francisco mints struck Morgan dollars throughout the entire production lifetime. Carson City produced Morgan dollars from 1878 to 1885, and again from 1889 to 1893. New Orleans also produced Morgan dollars from 1879 to 1904. The creation of these dollars was primarily a Government subsidy for the silver mining industry. Many more dollars were produced than actually circulated. Morgan dollar manufacturing stopped in 1904 due to the great stores of dollars, and the fact that all of the silver purchased under the 1890 Sherman Silver Purchase Act had been coined into Morgan dollars. Although the dollars were not popular for commerce, production would resume for a single year in 1921.

In 1918 a law known as the Pittman Act was passed to protect the federal gold supply and help the country's foreign trade balance by providing silver to the international market. At the time of the act, the availability of gold was extremely limited, but the U.S. had a considerable stock of silver coins and a large supply of silver ore as natural resource. Under the Pittman Act, as many as 350 million silver dollars would be melted and converted into silver bullion for sale to overseas buyers at \$1.00 per fine ounce. The Act authorized replacement of this bullion from American mine owners at a minimum of \$1.00 per fine ounce at a time that silver was only \$0.60 per ounce.¹ New silver dollars would then be struck to replace the deficit melted. This price floor increase resulted in silver production growth, supporting the domestic the silver industry. The US Treasury's holdings of silver were at their all time high during this period and the use of silver dollars in domestic transactions was extremely limited. Most of the newly minted coins went directly into storage vaults, rather than circulating.

In fiscal year 1918 and fiscal year 1919, over 270,232,722 dollars were actually melted, the group consisting of almost all Morgan dollars. The main buyer of the silver was Great Britain who purchased the equivalent of 259 million coins in bullion

¹ The Comprehensive Catalog and Encyclopedia of Morgan & Peace Dollars, By Leroy C. Van Allen & A. George Mallis (Worldwide Ventures, Inc. 3107 Edgewater Dr., Orlando, FL 32804, Fourth Edition 1997)

to finance a monetary crisis in their colony of India. The coins that were melted under the terms of the Pittman Act represented nearly half the entire production of silver dollars (excluding trade dollars) made by the United States Mint up to that date.²

To replace these coins, production of Morgan dollars was quickly resumed. The replacement bullion was a dead asset that could not be used to pay the Government expenses until coined into solver dollars for reserve against other forms of money.

The original master hubs used to make dies for striking coins were destroyed in 1910 after the production of Morgan dollars had been halted for six years. Believing no additional Morgan dollars would ever be produced, these master dies were destroyed. When production resumed in 1921, new master dies had to be quickly made. Several differences can be seen between the 1904 and 1921 dollars. One of the most obvious features is the depth of the lines in Liberty's hair and the eagle's wings, which are much more distinct in 1921 than in the previous production years. Contrasting the increased definition in the hair and wings is the lack of detail on the eagle's breast. The breast feathers are almost non-existent on anything but the sharpest strike. The relief on the entire coin was lowered. Liberty's cheek and the eagle's breast are much flatter than earlier coins. This low relief assisted production by allowing coins to be produced with less striking pressure. The mint realized that many of these coins would be stored as silver reserve, not actually circulated, so the aesthetic shortcomings of the 1921 dollar were a tradeoff for the production efficiency that would allow silver dollars to be cranked out quickly. Other variations on the 1921 master die included larger and deeper stars than the original design and a return to parallel arrow feathers on the reverse rather than the slanted arrow feathers that were used starting in 1879. The lettering font in the word LIBERTY is also slightly different. Several other minor variations can be found with additional study.

During the 1921 production run of Morgan dollars, Congress passed a law changing the design of the silver dollar to include a memorial to post-war peace, and the new dollar theme was changed to include the word PEACE. Production of these new coins supplanted Morgan liberty head dollars on December 29th, 1921. The remaining coins to satisfy Pittman Act were struck as Peace dollars.

In 1921, before the switch to the Peace dollar design, there were 86 million Morgan dollars produced at three locations. The rate of silver dollar production was enormous, easily dwarfing all of the previous year productions of Morgan dollars without even considering the additional 1921 Peace dollars minted. The previous high production year for Morgan dollars was 38 million coins minted in 1890. When completed, the mint struck 44.690 million 1921 Morgan dollars in Philadelphia, 21.695 million dollars in San Francisco and another 20.345 million dollars in Denver³. This was the first and only year that Morgan dollars were struck at Denver. Because there was only one year of production, many coin collectors seek to own the 1921-D dollar as the sole example of a Morgan dollar produced from this mint.

² The Comprehensive U.S. Silver Dollar Encyclopedia, Edited by John W. Highfill, (Highfill Press, Incorporated, Broken Arrow, OK, 1992)

³ A Guide Book of United States Coins 2003, by R.S. Yoeman, (St. Martins, Press, 175 Fifth Avenue, New York, NY 10010, 2003)

While producing 1921 coins, there was such a rush to create the enormous quantities of silver dollars required that the quality of the coins suffered. In Denver during 1921, the production line was pressed to its limits to create replacement dollars. Morgan dollars were never produced at Denver before 1921 and were never produced there again. Since the dollars had never been made at the Denver mint before, the operators were inexperienced in dealing with the large Morgan design. This led to tremendous quantities of die breaks in the 1921-D coins. The dies were pushed right to the point of failure and the result is that there are a large number of collectible die breaks to be found. The process of striking coins involves enormous pressure that weakens the die as it is used. During striking, the planchet metal is deformed when it is hit by the hammer die and this metal flows under the pressure, filling to the features on the die. This almost constant deforming process generates heat through friction which causes the die steel to become brittle and fatigue. Good preparation of dies, constant attention to their condition and good processes for removing dies nearing the end of their useful lifetime typically keeps dies from failing or forming extensive die breaks. The procedures used in 1921 obviously did not allow for early discovery and removal of cracked dies.

Coins created in Denver with die cracks are plentiful. Examine a small quantity of 1921-D coins and you are sure to find some with thin cracks running radially around the letter and the date. There is no other production run, either by year or mint location, which created so many silver dollars with this many die cracks or with so many significant die breaks.

A group of collectors has embraced the niche of 1921-D varieties, finding great fun with collecting them. There are an astounding number of interesting features on these coins including die breaks, die gouges and filled dies. These varieties are often visible to the naked eye, or with only slight magnification, making them easy to discover. When an interesting coin is discovered, the price is very reasonable. The dollars from Denver are inexpensive, especially in circulated condition. Most dealers have 1921 Morgan dollars available and are quite happy to allow collectors to dig through them. At least for today, 1921 dollars are fairly virgin territory for the variety enthusiast. The other end of the Morgan production run, 1878, has been worked extensively making it harder to find rare 1878 coins. As you will see in this reference, many new 1921-D discoveries have occurred in the last five years and experts feel there are still more new finds out there. In fact, of the fifty-seven die varieties discussed in this book, only two were known at the time the 4th edition of the big VAM book was published in 1997. Take a close look at the dollars you come across. You may make the next big find!

VAM Hint:

Check to see if there is a coin club in your area. Most clubs offer coin auctions where you will be able to check the offerings for die varieties. While dealers are sometimes reluctant to pull all the coins in their case for you to check for varieties, club auctions are VAM friendly. Take your time and examine each coin for doubling, die breaks, die gouges, and other unusual features.

Definitions

\mathcal{VAM}

Silver dollars are created by striking blank metal planchets with hardened dies containing the mirror image of the desired pattern. In a given year, many coins will be struck using many different pairs of dies. Through careful study, slight differences can be used to identify specific dies that created the coins. Sometimes these differences occur during the creation of the dies, at other times the differences are caused by the maintenance or use of the dies.

Extensive research on the variations in the dies used to strike silver dollars was published by Leroy C. Van Allen and A. George Mallis. The reference book they wrote is indispensable for anyone interested in Morgan varieties: Van Allen, Leroy C. and A. George Mallis (1997) <u>The Comprehensive Catalog and Encyclopedia of Morgan & Peace Dollars</u>, 4th edition, Worldwide Ventures, Orlando, FL The term VAM comes from the initials of their combined last names. Their work centers on Morgan dollars minted by the United States from 1878 through 1921 and Peace Dollars issued from 1921 through 1935 and is often called "the big VAM book" within the numismatic community.

The VAM system numbers every known die variety by date and mint mark with a one-up notation system. New varieties continue to be discovered and added. For every year and mint mark, VAM-1 is defined as the normal die state with no distinguishing characteristics. VAM-2 would be the next variety discovered that has a feature that can uniquely identify the die that made it. Such features may be doubling on the coin, a repunched mint mark, the date in a shifted position, or a number of other variations. Because of the one-up nature of the VAM number assignment, the numbers do not correlate across the dates or mint marks, i.e.: a 1880-O VAM-2 does not have the same distinguishing characteristics as a 1882-S VAM-2. Sometimes a letter follows the number i.e. VAM-1A. Typically this represents a later stage of the die that has a die gouge, major die break, pitting, die clash, or some other event that can be shown to have changed the die during the time it was striking coins. Letters are also assigned in a one-up fashion if additional designations of the same die are needed. In the 1921-D series, the sub-varieties of VAM-1 are extensive, running from VAM-1A through VAM-1Z continuing with VAM-1AA to VAM-1AB and onward.

JOH

In the hunt for new 21-D die breaks, many coins were found and sent to Leroy Van Allen for possible assignment as new VAMs. Some coins discovered during research were determined to have features that were too insignificant to be assigned a VAM number. Mr. Van Allen requires die breaks to be visible to the naked eye to be assigned as a new VAM. Jim Hart and this author decided that there was a need to label these unassigned coins to continue our research and discussion. In the spirit of the Leroy Van Allen - George Mallis VAM name, we decided to use JOyce - Hart numbers or JOH, pronounced "Joe"). Detailed descriptions of these JOH numbers start on page 108.

Die

A die is a hardened metal punch into which an inverse image of one side of a coin is impressed from a hub. A pair of dies, one for the obverse and one for the reverse, is used to strike a blank circle of metal known as a planchet. This process of striking impresses the design of the coin into the planchet.

Die State

The die state refers to a point in the production lifetime of a coin die at which time a particular coin was struck. By carefully examining the progression of features such as die cracks or die polishing, it is possible to identify approximately when in the die lifetime they were struck. Coins struck earlier can be determined from those struck later. These progressions are labeled Early Die State (EDS), Middle or Medium Die State (MDS) and Late Die State (LDS).

During use, dies crack, break, are modified by the press operator, or have other events change them. These changes result in different die states. Some coins have barely distinguishable die states, while others go through multiple distinctive ones. The coins featured in this book all have significant identifiable features that separate them from the average coin struck in 1921. Because of these features, a coin can be linked to a given set of dies based on the characteristics imparted to the coin at the time it was struck.

An example of advancing die states is illustrated below by the two photographs that depict the advance of the 1921-D VAM-1F die break.

In Example 1, there are cracks inside the M of AMERICA and to the left of the E. The coin demonstrates an Early Die State EDS of the cracks that will soon become a die break.

In Example 2, the die break has formed as blobs of metal inside the open area of the M and to the left of the E. These blobs growing bigger constitute the Late Die State, abbreviated LDS.



Example 1, Early Die State



Example 2, Late Die State

Another example of a progressing die break can be seen on page 21 which documents the development of the 1921-D VAM-1B "Capped R" fracture. Photos in this book typically are made from LDS coins unless otherwise noted.

Die Crack

A die crack is a raised, irregular line on a coin. These cracks result when a hairline break occurs in a die, allowing planchet metal to squeeze into the crack during striking. In Morgan dollars these cracks often run radially around the edges of the coin near the top of the lettering, through the stars or along the bottom of the date.

Die cracks are different than scratches on a coin that occur after it is minted. A close examination of a scratch and will reveal that it is physically etched inward on the surface of a coin. Die cracks are raised on the surface of the coin because the metal flows outward into the cracked space in the die. These die cracks are extremely useful in the study of die varieties as the cracks form a unique fingerprint, identifying specific dies.

Die cracks are the major reason that dies are retired from service. Many 1921-D dies were used past the point at which they should have been retired, making substantial die cracks a frequent feature of the Denver Morgan dollars. Die cracks are very common, especially on 1921-D dollars, and do not typically add to the value of a coin.

Die Break

A die break is a crack that has advanced to a sufficiently large size that a chunk of steel has fallen out of the die. This break creates a hole in the die where metal flows when coins are struck. The resulting coins have visibly displaced metal in the break area, more than simply the fine line of a die crack. Die breaks are typically large enough to be seen with the naked eye. The impact of each striking brings pressure that may widen an existing break, causing it to thicken. Larger, clearly visible, breaks are more desirable than smaller ones. Bold and unusual breaks are very collectible and command a premium from collectors that appreciate the rarity of a die break.

Cud

A die break that is extensive enough to cause a large portion of the die to split away from the outer edge is called a cud. These cuds are typically seen as a crescent shaped blob of raised metal along the rim of a coin. Cuds contain no design details within them because the ability to impart an image in that region was lost with the broken piece of the die. Occasionally coins are stuck by dies with a section of the design completely severed but failing to fall away. These events are called retained cud and will usually advance to a complete cud if striking continues.

The mint press operators usually notice and remove a die from service before die cracks or breaks advance to the point a cud occurs. The biggest known cud in 1921-D Morgan dollars is the VAM-1X cud (Page 52). A cud of this size is extremely rare in the Morgan dollar series. Another cud can be seen on the very late die state of the VAM-1N (Page 37). These are the only two known cuds from the Morgan dollars produced in Denver.

- 11

Die Polishing Lines

Die polishing appears on coin as very fine raised lines of varying thickness. These lines are called die polishing lines. These die polishing lines are distinguishable from die cracks because polishing lines are often found in groups of straight parallel lines. Die cracks are typically irregular rather than straight and usually are not found in tight parallel groups. Die polishing lines are also finer than die cracks.

Workers at the mint periodically buffed or polished a die to remove defects such as clash marks, scratches or other problems. In the course of polishing the die to remove the imperfection they sometimes left slight lines, actually scratches into the die. These scratches are die polishing lines. The scratches are imparted to coins as they are struck, appearing as raised lines. As more coins are struck with these dies, the scratches become fainter and will often disappear on the later strikes.

One place polishing lines can often be found on Morgan dollars is within the bow on the reverse wreath. Die polishing is considered a minor feature that does not add a premium to the value of the coin.

Die Gouge

A die gouge is a large scratch etched into a die. Wider than die polishing lines, die gouges can often be seen with the unaided eye. Because a tool or other hard object made a mark into the die, the resulting coins created with the gouged die have the "gouge" raised above their surface. For a list of locations that die gouges have been found on 1921-D Morgan dollars, see Table 3 on page 16.



1921D VAM-1U Die Gouge

Filled-Die

Filled-die errors cause elements of a coin's design to disappear. Some are severe enough to obstruct almost the entire die, while some are localized and obstruct only a small portion of the design. A die imparts its design on the surface of a coin because the pressure of the strike forces metal up into the cavities of the die design. A die looks like the exact mirror image of the coin it is going to strike, so the words, numbers and portrait and other details are set into the surface of a die. If anything fills into those recessed areas when the die tries to strike a coin, the metal in the coin will not flow into the area that is filled or clogged. Most filled dies were caused by the heavy grease used to maintain the presses.



Example Filled Die: VAM-1AI

The Mint is a production facility with dirt on the floor, dust in the air and grease oiling the high-speed machinery. It's not difficult to think that a little – or a lot – of grease and dirt could end up on the dies. Filling can occur on any portion of the coin and often has a short lifetime. In fact, filled-die errors occurred quite regularly, though those that feature a major obstruction of the coin's design are considered most desirable and bring the largest premium for collectors.

The first die variety ever documented in the 1921-D series was the "Tru_t" VAM-1A in which the S in Trust appears to be missing. A small bit of grease was compressed into the S on the die to form this error. This filled die is recognized as a variety because of its uniqueness and the unusually long time the obstruction remained during striking. Since the discovery of VAM-1A, numerous other filled dies have been found. A list of the known filled dies can be found in Table 4 on page 17.

Die Chips

Die chips show up on the surface of a coin as a raised lump of metal. Their cause is similar to die cracks – a small chip of metal breaks away from surface of the die from fatigue, creating a void that coinage metal flows into during striking. Unless the chip is large or creates an unusual flaw on the coin, chips are considered minor errors and do not significantly increase the value of the coin.

Die Clashes

Die clashes are formed when one die strikes the other die without a planchet between them. This leaves some of the details of the obverse die on the reverse die and some of the details of the reverse die on the obverse die. Most of the evidence of a die clash can be found in the low areas of a coin. As more and more coins are struck with these dies, the details of the die clash will fade. One example of a die clash on a 1921-D Morgan can be found on the VAM-1R coins (page 46).

Most clash marks are not considered special on Morgan dollars. Some advanced collectors, however, have paid significant premiums for examples of clashes that transfer lettering from one side of the coin to the other. Thus far, there have been no reported examples of these extreme clashes transferring lettering on any 1921 coins.

VAM Hint:

Take the time to learn about which VAMs are truly rare and which are readily available. The scarcity of specific coins is often unknown at the time reference books are published. Once the VAM collecting masses pursue these coins more are uncovered. Others remain with only a very few specimens. Learn which coins are hard to come by through reading the latest VAM publications, talking with other collectors and paying attention to which coins are almost always available for purchase.

Attribution Aid

This section contains tools that may be used to speed identification of 1921-D varieties. Tables 1 and 2 contain a listing of the known 1921-D die irregularities organized by where the specific features occurs on the coin, providing a reference to the page with detailed information on the variety. The first two tables separate the location of varieties into obverse and reverse feature tables. To use this aid, find the unusual feature (die break, die gouge, etc) most prominent on the coin and locate the corresponding reference in the table. The reference point may be lettering such as the word PLURIBUS or it may be a design element such as a star. From the entry or entries in the table, compare the coin in question to the detailed photographs and line drawings by flipping to the designated page.

Tables 3 and 4 (pages 16 and 17 respectively) are specialty tables, containing only die gouge and filled die references, respectively. Since there are less of these variety types known, these listings may provide quicker access to the correct page if the feature is already known to be a die gouge or filled die rather than a die break, crack or chip.

If a matching description can not be found within these tables, try flipping through the line drawings beginning on page 133, to match the die cracks on the subject coin.

Location	VAM #	Description	Page
Neck	JOH-14	Small break on Liberty's neck	116
PLURIBUS	VAM-1W	Die break between B and U of PLURIBUS	51
PLURIBUS	VAM-1X	Large rim cud at E-PLURIBUS extending down into letters	52
Star (1L*)	VAM-1E	Horizontal break through left first star to neck	26
Star (2L*)	VAM-1H	Spider web stars. Die break lower left of second star to denticles	29
Star (3L*)	JOH-2	Die break 3 rd left obverse star, top left point	Erro r! Boo kma rk not defi ned.
Star (3L*)	VAM-1AG	Die break 3 rd left obverse star, bottom point	63
Star (5L*)	VAM-1K	Die break lower left side of 5th left star	33
Star (6R*)	JOH-15	Small break 6 th right star and small break D of UNITED	118
1 in 1921	JOH-18	Die Break lower left side of 1 in 1921	121
2 in 1921	JOH-8	Small die break lower part of 2 & D UNITED	111

Table 1 - Obverse Die Diagnostics

* Stars are numbered from the date upward toward the top of the coin, L= Left, R=Right

Table 2 - Reverse Die Diagnostics

Location	VAM #	Description	Page
AMERICA	VAM-1F	Die break top middle of M, top left of E	27
		running left	
AMERICA	VAM-1D	Die chip inside top right of M, running left	24
AMERICA	VAM-1L	Die break top left of M extending left	34
AMERICA	VAM-1AR	Die crack top left of M extending left	76
AMERICA	VAM-1P	Die break between ER	40
AMERICA	VAM-1T	Die break at top left of E	48
AMERICA	VAM-1B1	Capped R - Break over R (semicircle spaced away from R)	20
AMERICA	VAM-8A	Flag R (triangle runs along R)	98
DOLLAR	VAM-1AF	Die gouge D of DOLLAR	62
DOLLAR	VAM-2A	Die gouge in O of DOLLAR	88
God	JOH-17	Weak God. Filled die in motto	120
OF	VAM-1F	Die Break M, also horned O on very LDS coins	27
OF	VAM-1M	Die breaks left and right on top O in OF - Horned O (See also 2nd S States)	35
OF	VAM-1V	Die breaks left and right on top O in OF - Horned O	50
OF	VAM-10	Die break extending to right at top of A in STATES, horned O on LDS coins	39
OF	VAM-1AJ	Die scratch between O and F in OF	68
OF	VAM-1D	Die break in denticles above F in OF	24
ONE	JOH-3	Die break O of ONE	109
ONE	VAM-1U	Diagonal die gouge from E thru bow to #1 tail feather	49
ONE	VAM-1AA	Die gouge denticles to lower left of E in ONE	56
ONE	VAM-1AK	Vertical die gouge E in ONE	69
STATES	VAM-9	Die break serif right, first S STATES	102
STATES	VAM-1AH	Die break serif top, first S STATES	65
STATES	VAM-1J	Die break A extending left into denticles	31
STATES	VAM-1F	Die break top right of A in STATES	27
STATES	VAM-10	Die break extending to right at top of A in STATES	39
STATES	JOH-9	Die cracks above A in STATES	112
STATES	JOH-10	Die cracks above A in STATES #2	71
STATES	JOH-13	Die cracks above A in STATES, Liberty's cap	115
STATES	VAM-1Q	Pompadour T - die break top of second T	43
STATES	VAM-1R	Die break top left of second T	45
STATES	VAM-2B	Small Die break between E and S (see also obv M of UNUM)	90
4			04
STATES	VAM-5A	Die break ES	94

STATES	JOH-16	"Bean bottom S" Die break lower loop of 2nd S	119
STATES	VAM-1W	Die break top of 2nd S & between B and U of PLURIBUS	51
STATES	VAM-1M	Die breaks upper serif of second S	35
STATES	VAM-1AD	Die break top 2nd S STATES – Beanie S	60
STATES	VAM-1AE	Die chip inside top loop of 2 nd S	61
Tail feathers	VAM-1AB	Die gouge in tail feathers	18
Trust	VAM-1A	Tru_t filled die. Missing "S"	19
Trust	VAM-1AC	T_ust filled die. Missing "R"	59
Trust	VAM-1AI	_rust Filled Die #2	67
Trust	VAM-9A	_rust Filled Die #1	103
UNITED	VAM-1i	Die break top left of N	30
UNITED	VAM-2B	Die chip top left of T (See also obv M of UNUM)	90
UNITED	VAM-1N	Die break top of D extending up and right to rim	37
UNITED	JOH-15	Small die break top of D in UNITED extending up and right and 6 th right obverse star	118
UNITED	JOH-8	Small die break top of D in UNITED extending up and right and 2 of 1921	111
UNITED	JOH-11	Die cracks ED of UNITED	113
UNITED	VAM-1S	Die gouge thru ED.	47
UNUM	VAM-2B	Die break top left of M, doubled date	90
We	VAM-1B2	No E in We, Capped R Die Break	23
We	VAM-1Z	No E in We	54
We	VAM-11A	Missing We in the motto	104
Wing	VAM-1D	Die cracks from eagle's right wing into denticles above OF	24
Wing	VAM-7	Die chip eagle's right wing, cracks across TED	97
Wing	VAM-3A	Die break eagle's right wing to denticles above S in STATES	92
Wing	VAM-12A	Die crack through eagle's left wing and die break wreath – middle leaf cluster on left	105
Wreath	VAM-12A	Die break wreath – middle leaf cluster on left and die crack through eagle's left wing	105

Table 3 – Die Gouge Locations

Location	VAM #	Die Gouge Description	Page
DOLLAR	VAM-1AF	Die gouge D in DOLLAR	62
DOLLAR	VAM-2A	Die gouge in O of DOLLAR	88
OF	VAM-1AJ	Die scratch between O-F	68
ONE	VAM-1AK	Vertical die gouge E of ONE	69
ONE	VAM-1U	Die gouge E of ONE through wreath bow	49
ONE	VAM-1AA	Die gouge denticles to lower left E of ONE	56

ONE	VAM-1AL	Die gouge NE of ONE	70
Tail Feathers	VAM-1AB	Line in tail feathers die gouge	18
UNITED	VAM-1S	Die gouge ED of UNITED	47

Table 4 – Filled Dies

Location	VAM #	Filled Die Description	Page
God	JOH-17	"Weak God" filled die	120
Trust	VAM-1AI	_rust Filled die #2	67
Trust	VAM-9A	_rust Filled die #1	103
Trust	VAM-1AC	T_ust filled die	59
Trust	VAM-1A	Tru_t filled fie	19
We	VAM-1B2	No E in We filled die, capped R die break	23
We	VAM-1Z	No E in We	54
We	VAM-11A	Missing We in motto	104

VAM Hint:

eBay, an internet auction site, can be a tremendous place to purchase VAMs. On any given night, attributed and unattributed varieties are offered by a wide range of sellers. Some of the most experienced variety specialists buy and sell on eBay. In addition to the experts selling coins, there are also folks that don't understand die varieties and incorrectly label coins. Buyer beware.

One method to ensure you are getting the variety you want is to attribute it yourself armed with good documentation. Many of the varieties in this book can actually be found by looking at auction coin photos. The die break and filled die features of the 1921-D VAMs are so prominent that they can be cherry picked from right through your computer screen!

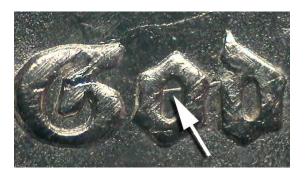
1921-D VAM-1A1 "Pierced Tail Feathers"

Discovered by Larry Briggs, November 2002 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar$) Formerly VAM-1AB. Connected to the former VAM-1A by John December 2004 Condition Census: 63A, 62A, 61N, 61A, 60A (Total: Total: 5 MS, 3 Circ)

The pierced tail feather variety has proven to be elusive. Only one coin was known with this unique die gouge at the time of first publication of <u>Fun With 1921</u>. More have emerged, but this variety has proven to be one more the more difficult coins to find. The most interesting discovery was made when John Baumgart noticed the Top 100 VAM-1A2 (former VAM-1A) TRU_T filled die had the exact same die gouge! Everybody's attention was drawn to the eye-popping missing letter and the die gouge went unnoticed.



Some of the VAM-1A1 coins contain a die gouge within GOD.



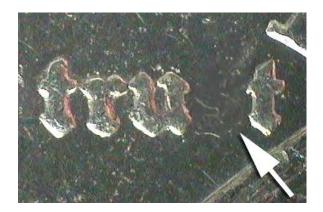


1921-D VAM-1A2"TRU_T" Top 100

Discovered by Hal Justice, December 1968 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 65N, 65N, 64P, 63N, 63N (Total: 17 MS, 22 Circ.)

Made popular by one of the leading VAM reference books, The Top 100 Morgan Dollar varieties: The VAM Keys, by Michael S. Fey, Ph.D. and Jeff Oxman, VAM-1A coins are among the most widely known of all 1921-D die varieties. This particular coin can be easily recognized with the naked eye as the S in Trust is completely missing on the reverse. A small amount of grease, used to lubricate the coining press, filled the letter on the die. When coins were struck with the greasy die, metal could not flow into the letter.

Unlike many of the die breaks and die gouges documented in this book, the die fill happened early in the life of this die. We can tell the dies were fresh since the coins exhibit prooflike reflective qualities, a trait uncommon on most 1921-Ds.



The VAM-1A variety is worth a huge premium over common 1921-D coins. A few sharp-eyed collectors noticed a VAM-1A in a PCGS MS-65 holder during an online auction at Heritage Coins. Although unattributed when the auction closed in February 2003, the coin brought \$575, while the Greysheet Bid was only \$75 for a standard coin. Experts in the VAM community agree that the sale price would have been much, much higher had the variety and sale been widely known.



1921-D VAM-1B1 "Capped R" Hot-50

Discovered by Martin Field, October 1983 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 65N, 64N, 63N, 63A, 63A (Total: 17 MS, 68 Circ.)

This variety has an interesting die break above the R in AMERICA. It looks almost like the R is tipping a small cap. The coin shows extensive die breaks on both the obverse and the reverse, with the late die stages having a portion of the die actually falling away to create the Capped R effect. This VAM is actually one of the more easily found examples of the large 1921-D die breaks. At this time it is not



known if this is because the die break is so distinctive and is easily visible to the naked eye or if it is simply because many examples were produced. Whichever the case, this is one of the more interesting varieties to collect a

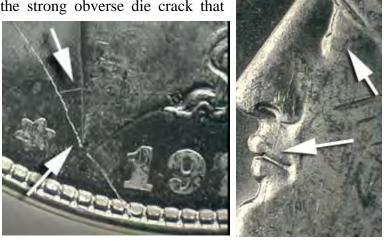
nd it is available from circulated through high quality uncirculated pieces. Please be careful to confirm even slabbed varieties are correctly attributed. Several VAM-8A Flag R die breaks (page 98) are in holders labeled VAM-1B. The VAM-8A die break is triangular while the VAM-1B break forms a rounded semicircle.

When a VAM-1B is discovered, be sure to check the word We on the reverse. A missing E in We is the *ultra rare* second die state of VAM-1B. Pictures of VAM-1B2 are available on page 23.

One of distinctive features of the VAM-1B1 that can be used to scan for the variety is the strong obverse die crack that

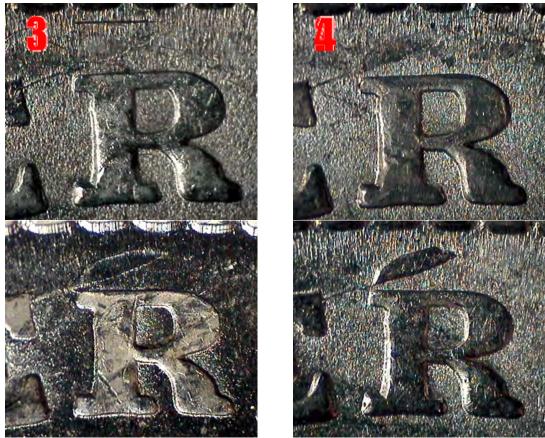
formed near Liberty's neck.

This crack extends upward to the chin and in well preserved cases of the medium and late die states it can be seen progressing across Liberty's lips and nose. Collectors of 1921-D coins will routinely be offered coins with riddled



with die cracks. Ones with a crack running through liberty's face usually turn out to be the Early Die State (EDS) version of VAM-1B, which is a stage before the Capped R is formed.

Pictured below is a sequence showing the VAM-1B die break advance from an Early Die State (EDS) in the top left photo, down through the Late Die State (LDS) in the bottom right picture where the die break is strong and distinctive. In the first picture, notice the small die crack running diagonally above the top left side of the R, with the slightest change in luster above the letter where the cap will develop. In the second photo, there is a subtle outline of the cap position. In the third photo, the cap has been defined by a die crack. Finally, the die breaks and the portion falls out, allowing the small cap over the R to form. What a great example of a die break progression!



The hand-drawn lines of die cracks on the images below approximate the locations of the variety features. The thickness of the line does not necessarily represent the size of the crack on the real coin. Often these cracks are extremely fine, present only on the latest die state coins, and need significant magnification to be seen. These cracks are like fingerprints, uniquely identifying specific dies.



1921-D VAM-1B2 "Capped R, No E in We" Hot-50

Discovered by Rob Joyce, February 2003 (R-7, Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 50A, 45R (Total: 0 MS, 2 Circ.)

This variety is one of the most exciting finds of the entire 1921-D variety group. It combines the large die break of Hot-50 "Capped R" coin with a missing letter much like the Top-100 1921-D coin, VAM-1A. The VAM-1B2 has a late die state break above the R in AMER-



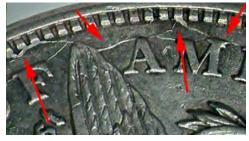
ICA combined with a reverse filled die where the E in We has been clogged. The missing E was most likely filled with the grease used to lubricate the presses. For a short period of time, the resulting coins struck with this die had no E on the reverse. The VAM-1B2 variety appears to be *ultra rare*. Hundreds of the standard VAM-1B1 coins are known but at the time of this writing, there were only two VAM-1B2 coins discovered. Evidently the clog cleared quickly or more of these sought after coins would be reported by collectors.





1921-D VAM-1D "Die Break in Denticles"

The VAM-1D variety has extremely heavy die cracks near the top of the eagle's right wing. Additionally, there are long die breaks in denticles above F in OF and a smaller die break touching the denticle above of M in AMERICA.



There are several breaks occurring on the late die

state of the VAM-1D. Most noticeable is the large loop of metal coming off the denticles above the F on OF. Another die break emerges from the denticles above the M in America. Finally, the top right portion of the M has broken, enlarging the serif adorning the letter.

There are several breaks occurring on the late die state of the VAM-1D. Most noticeable is the large loop of metal coming off the denticles above the F on OF. Another die break emerges from the denticles above the M in America. Finally, the top right portion of the M has broken, enlarging the serif adorning the letter. For a short period of time, there was a VAM-1BA assigned as a break over the M of AMERICA. Jack Lee realized that this was actually an early die state of VAM-1D and the VAM-1BA assignment was retired in April of 2005 by Leroy Van Allen.

The reverse of this dollar has the appearance of a spider web, with die cracks around the eagle's right wing. Unlike many other 1921-D coins with extensive reverse die cracking, the known examples of this coin do not exhibit many obverse die cracks. It is likely that the obverse die was mated to a reverse that was already in use. Die "pairs" were not always entered into service simultaneously. In the Morgan dollar series there are numerous examples of die successions that can be followed through their chain of use. The 1878 8-Tailfeather VAMs are one series that has had extensive research on die progression. Interesting work on the 1879-S reverse of 78 series has also revealed die progressions where a single die used on one side of a coin is retired and another takes its place to join the one already in service. No research on die progressions has been performed on the 1921-D production thus far.

This die variety also has a small dot in the eagle's right shoulder. Some Morgan researchers now believe that these small dots, found on many 1921 Morgan dollars, are the result of inferior die steel. Others have hypothesized that the dots are from hardness tests or used to uniquely identify a specific die. The mystery remains unsolved and the VAM-1D is one example of the strangely dotted dies.





1921-D VAM-1E "Die Break Thru Star"

Discovered by Michael Fey, October 1998 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 62A, 62P, 62A, 62A, 62R (Total: 6 MS, 3 Circ.)

The VAM-1E coin is defined by a horizontal die break running from rim through first star then through Liberty's neck.

The very late die state of VAM-1E has displaced metal on the star from a vertical die crack.



The VAM-1E variety seems to be much more available than the Rarity 7 value (extremely rare, few tens), assigned to it. While the die crack is interesting, it actually runs across the top of the star, it is much less spectacular than many of the other 1921-D die breaks.

Many VAM hunters that specialize in die breaks will



snatch up even the most worn examples of a nice late die state coin with a prominent break. In the case of this VAM, it is not necessary to accept a worn coin if you are just looking for the horizontal crack across the star. Mint state examples of this EDS variety are available and collectors building a set would be wise to pass on coins that show significant wear. The LDS version seems much harder to find so if you find one with the vertical crack, snatch it up.

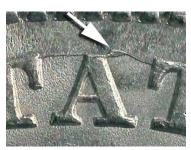


1921-D VAM-1F "Die Break M"

The VAM-1F die break forms a triangle inside the top center of the M in AMERICA. There is also a small break extending from the top left of the E.



Another small die break extends to the top right of the A in STATES. This break is visible on the coin before the small die break forms on the M and E of AMERICA so it is useful to identifying EDS VAM-1F coins.



Very late die states of this coin have a "horned O" die break on the word OF. A similar break occurs on several 1921-D varieties including VAM-1V (page 50) and VAM-1M (page 35).





1921-D VAM-1G "Die Break Second S Of STATES"

The 1921-D VAM-1G has a spectacular die break on the reverse through the second S of STATES. Three different spikes have grown out of the top of the S. One die break emerges from the upper left side pointing back at the E. Another break curves out of the top and swoops to the right like a small hook. A final die break comes from the top and meets up with the serif. While other Morgan varieties exhibit breaks on this S, there is no other that matches it for its intricacy.

The VAM-1G die break expanded and progressed as the die continued to be used. It began as a small hook at the top of the S and then joined a second crack until the break a fully filled spike on top the letter.







Although you might have

to be satisfied with a worn circulated example of

many of the 1921-D die breaks, patience and perseverance could yield a collector a high quality VAM-1G coin. Nice mint-state examples of the VAM-1G die break are available, although the late die state version looks to be much harder to find and will be work significantly more.

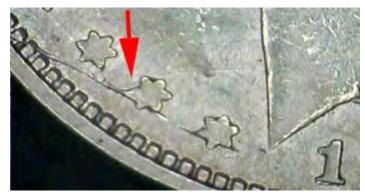
(@@@@@@ dot, denticles)



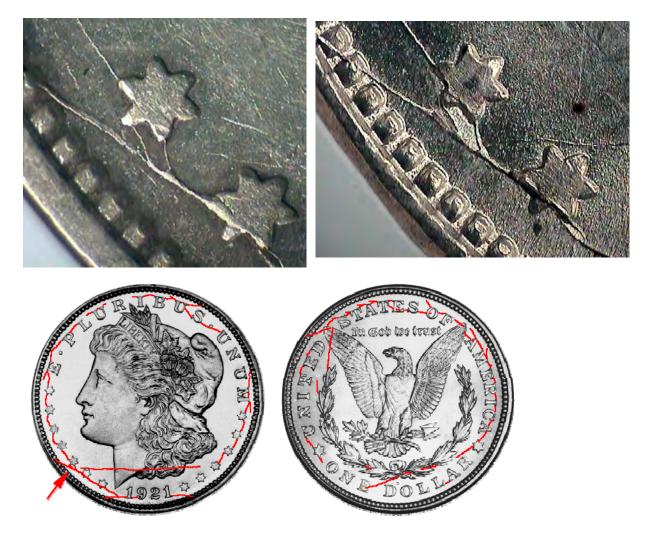
1921-D VAM-1H "Spider Web Stars"

Discovered by Michael S. Fey, Ph. D., October 1999 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 65NTC, 65AGC, 64R, 58R, 55A (Total: 3 MS, 12 Circ.)

This variety has a long die break running from below Liberty's neck, through the first four stars to the left of the date. In VAM-1H, the second left star from the date has the strongest break and is elongated from the crack. The crack also forks just before the third star and intersects the rim.



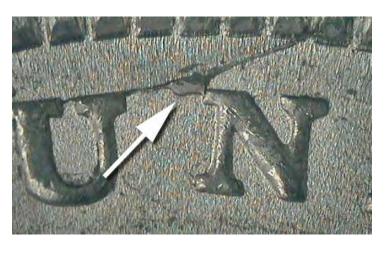
Below are close up photographs of this die break with a spider web likeness.



1921-D VAM-1i "Die Break N"

Discovered by Michael S. Fey, Ph. D., October 1999 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 65P, 65A, 63A, 61A, 60R (Total: 5 MS, 12 Circ.)

The die break on the VAM-1i caused a small chunk of metal to fall from the die at the top left of the N in UNITED. The raised metal on coins struck from the broken die is very visible for easy attribution even without a magnifier.





VAM Hint:

Most VAM collectors use a 7x to 10x magnifier (enlarging seven to ten times), called a "loupe", to examine coins. A loupe can be carried to a coin show or a dealer in order to look for VAM features. Quality magnifiers use multiple glass elements to reduce distortion or color shift. One good type of magnifier with multiple elements is called a Hastings triplet. Also of importance is the field of view. The larger the field of view, the more coin you can see at once. A high quality magnifier with a large field of view will help to reduce eye strain when looking at a lot of coins.

1921-D VAM-1J "Die Break A"

Discovered by Michael S. Fey, October 1999 (Desirability: ★★★★★) Condition Census*: 65N, 64N, 64N, 64N, 63N (Total: 6 MS, 11 Circ.) *LDS coins only. EDS coins are available, but not as impressive.

VAM-1J exhibits a large die break above the top of the A in STATES extending up and left into the denticles. Considered the "King" of 1921-D non-cud die breaks, this is one of the largest die breaks in the 1921-D series. At the time "Fun With 1921" was published, there were only six known coins in the condition census. It appears that a small group of high quality coins was certified at NGC without the realization that they were this rare VAM. While the high end of the population has grown, this is a very tough VAM to find!



The late die state of this coin showing the huge break is extremely rare. Early die state coins with cracks above the A in STATES, but not exhibiting the large break, are more common than the full die break but are still hard to find. It appears that the die was taken out of service shortly after the break occurred, limiting the number produced. The very latest coins struck have a retained cud over the ED of UNITED and are the most valuable examples.

31



1921-D VAM-1K "Die Break 5th Left Star"

Discovered by John Baumgart, December 1999 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 50S, 50R (Total: 0 MS, 2 Circ.)

Die break lower left side of fifth left star.

A sleeper in the series, only two examples of this coin are known. Is it because the die break is hard to spot on the star? Perhaps it is that most 21-D breaks are on the reverse and cherry pickers focus more there. Only time will tell if this rarity holds up!



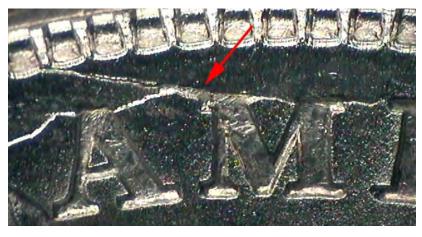
Heavy die cracks extends from fifth left star to below second left star and continuing to Liberty's head and neck.



1921-D VAM-1L "Die Break AM"

Discovered by Michael S. Fey, May 2000 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 63R, 63A, 62A, 62A, 62A (Total: 9 MS, 22 Circ.)

The VAM-1L variety has one of the nicer breaks in the 1921-D grouping. There is a significant die break emerging from the top left side of the M in AMERICA, running to the left toward the neighboring A. Look at the size of the break coming off the M!



Please note that there is an amazingly similar die crack in the same shape as the die break on the VAM-1AR (Page 76) coin. If you have what looks like a VAM-1L early die state, be sure to check the diagnostic cracks on the VAM-1AR to be certain of the attribution.

One key to distinguishing a VAM-1L coin from VAM-1AR is the slightly upward curving crack between the IC of AMERICA.





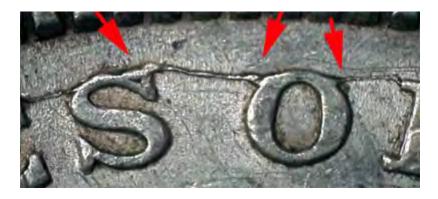
1921-D VAM-1M "Horned O in OF + Break at top of S"

Discovered by Herb Zepke, September 2000 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 63P, 62A, 60R, 55A, 50R (Total: 3 MS, 12 Circ.)

On the VAM-1M, a die break has deformed the last S in states, adding metal above the upper serif. Additional breaks are seen at the top left and right of the O in OF giving it small horns. These horns are slightly less pronounced than the VAM-1V (page 50) which is a different "Horned O" variety. Condition Census: 64N, 63P, 63A, 62A, 62R (Total: 8 MS, 18 Circ.)

On the VAM-1M, a die break has deformed the last S in states, adding metal above the upper serif.

Additional breaks are seen at the top left and right of the O in OF giving it small horns. These horns are slightly less pronounced than the VAM-1V and the late die state VAM-1F which are different "Horned O" varieties. There is also a thin die scratch emerging from the denticles toward the F in OF, disappearing and then reemerging out the bottom of the F. Extensive radial cracking can also be seen across almost a third of the reverse, connecting the tops of many letters.



Extensive radial cracking can be seen across almost a third of the reverse, connecting the tops of many letters.



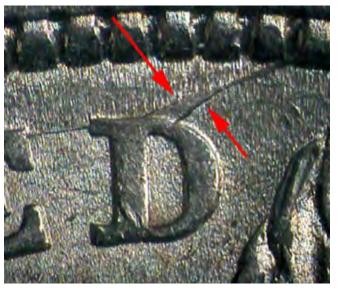


1921-D VAM-1N "Unicorn D"

Discovered by Michael S. Fey, Ph. D., Dec 2000 (Desirability: ★★★★★) Condition Census: 65P, 65P, 65P, 64P, 63P, 63R, 62A, 62A, 62A, 62A (Total: 9 MS, 8 Circ.)

The VAM-1N exhibits a striking die break that emerges from the top of the D in UNITED. Looking much like a unicorn horn, this break is clearly visible to the naked eye for easy cherry picking. If you are looking for a nice example of a showy 1921-D die break, this coin is a good choice. Since the first edition publication of "Fun With 1921" this has proven a popular variety, trading at many multiples above common price.

Very late die states of this coin actually form a retained cud where



the field of the coin is raised above the ED in UNITED. While a good example of the die break above the D is elusive on its own, the very late stage pictured below is *ultra rare* and worth significantly more than even the nice die break example.





1921-D VAM-10 "Die Break A"

Discovered by Herb Zepke, February 2001 (Desirability: 📌 🕇 Condition Census: 62R, 55A, 55R (Total: 1 MS, 2 Circ.)

The VAM-10 (VAM 1-"Oh" not ten) variety has heavy die cracks through the tops of the letters in STATES OF. The cracking culminated into a die break extending to the right at top of the A in STATES.

This variety also has another unique double die crack between OF and the eagle's wing on the reverse. Finally, there is a faint doubling of the outer leaf towards rim of lower three wreath leaf clusters.

As you can see from the condition census, the VAM-10 is a major rarity with few known specimens.







VAM Hint:

Many advanced collectors make a notebook of VAM information to take to coin shows or coin shops. Knowledge is key when hunting for VAMs and it is often impractical to take all of your reference books. A well organized series of notes, key photocopies and other reference material will be invaluable during cherry picking expeditions.

1921-D VAM-1P "Die Break E R"

Discovered by Michael S. Fey, May 2001 (Desirability: $\bigstar \bigstar \diamondsuit \diamondsuit$) Condition Census: 64N, 63P, 63N, 63A, 63R, (Total: 11 MS, 17 Circ.)

The VAM-1P die break can be found as a small oval dot between the E and R of AMERICA.



Also on the reverse there is a very small die break coming off the T in STATES.



The U in Trust is "spiked" with a small and unusual die gouge.



In April 2005 Norm Salter noticed that on the Eagle's right wing there is a sizable gouge.



The date has extensive die cracks on the obverse showing just how far this die pair was pressed while it was in service.



A very long die crack runs through Liberty's eye, up through the hair, between the B and E of LIBERTY, past the headband, through the S in STATES and on to the rim!



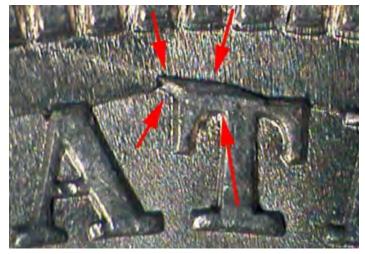


1921-D VAM-1Q "Pompadour T - Die Break T Top"

Discovered by Jim Hart, June 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 64 P, 63A, 63A, 61A, 61A (Total: 5 MS, 11 Circ.)

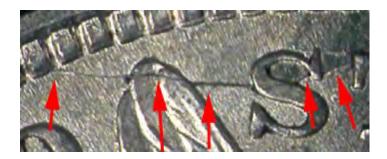
This die break runs across the top of the T in STATES. Looking like a windswept hairdo, this unusual break has extended the upper left potion of the T. This funky styling of the T is the reason it was nicknamed "Pompadour."

The VAM-1Q appears to be quite rare in mint state. Even circulated coins are tough to find. A XF/AU circulated example of this break sold for



\$77.25 on eBay in April of 2002.

There are few other die cracks on this variety. One diagnostic crack can be found running from the Eagle's right wing across the top of the reverse above the word OF.



Very early die states of 1Q have a small circular dot raised from the field next to the sixth right obverse star.





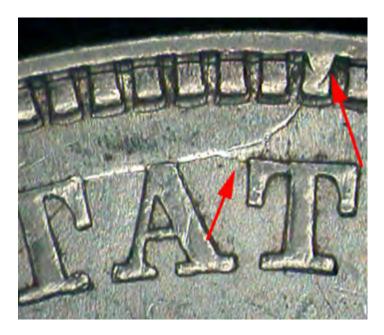
1921-D VAM-1R "Die Break T Left"

Discovered by Jim Hart, June 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 62R, 60S, 58A, 58R, 50R (Total: 2 MS, 8 Circ.)

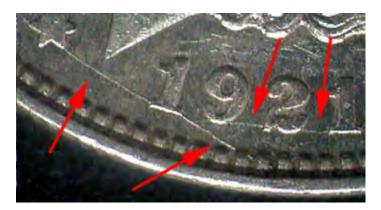
VAM-1R has an unusual die break at the top left of AT in states. Late die states are much tougher to locate and are more interesting than early die states without the lump of metal hanging off the T. Die cracks also originate from the eagle's right wing tip to bottom of the S in STATES, continue through the middle of first T and across the tops of AT in STATES up to the rim.



An early die state (EDS) version of the die break (below) outlines where the metal will be displaced on later strikes (above).



A very straight die crack on the obverse runs from the lower right of the first star to the left of the date, straight down to the bottom left of the 1 in the date, continuing out the opposite side down into the denticle.





The reverse of the VAM-1R coin has a die clash inside the right side of the wreath. This mark was made when the two dies struck together without a blank planchet between them. The mark was left on the reverse die from the impact of the obverse die, scarring the reverse with the back side of Liberty's hat. Close examination of the lower back of her hat will reveal the design feature that left this clash mark. Similar clash marks in the same location can be found on other dates and mint marks in the Morgan series. This is the only known 1921-D die break coin with a reverse clash.





1921-D VAM-1S "Die Gouge ED of UNITED"

Discovered by Jim Hart, June 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 40A, 40R (Total: 0 MS, 2 Circ.)

An incident with a tool or some other hard object caused damage to the surface of the VAM-1S die. Because the image on the die is an inverse of the coin produced, the gouge into the die metal causes a raised mark on the resulting coin.

This particular VAM has a fairly long gouge, running from the left side of the E in UNITED, up and through to the top left side of the D.

Finding this coin along with the other die gouges (VAM-1U, VAM-1AA, VAM-1AB, VAM-1AF, VAM-1AJ, VAM-1AK, VAM-1AL and VAM-2A), is a tough VAM challenge. Try collecting them as a great mini-set!

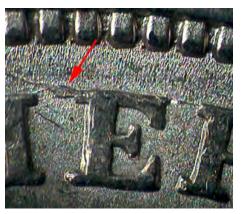
Like many of the 1921-D die gouge coins, this one has been elusive, with only two discovered thus far!

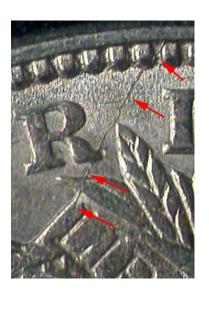
(** update... jack discovered second gouge parallel coming out of wreath. Need his coin for better photo. @@@@@@)

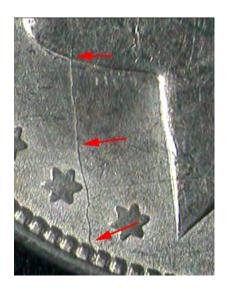


1921-D VAM-1T "Die Break E Left"

The VAM-1T die break can be seen as a small tail forming off the top left of the E in AMERICA. While the break itself is fairly unremarkable in terms of 1921-D die flaws, there are substantial die cracks elsewhere that make this coin desirable. Take a look at the extensive crack that runs almost rim to rim on the obverse. Starting between the first and second left star under liberty's face, the crack proceeds up through her jaw, behind her mount and emerges out the top of her head to finish between the R and I of PLURIBUS.











1921-D VAM-1U "Die Gouge E & Wreath Bow"

Discovered by Jim Hart, June 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 65P, 65A, 64R, 62A, 62R (Total: 7 MS, 2 Circ.)

The VAM-1U has a diagonal die gouge from the E in ONE through the wreath bow to the first tail feather on the right. Seldom encountered, this is one of the longer die gouges in the Morgan series, making it prized by VAM collectors. As evidenced by the condition census, a few high quality examples of this VAM have surfaced.

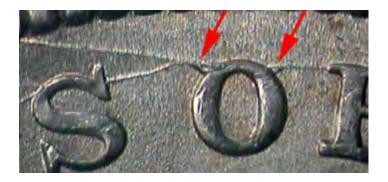
@@@@Check weak T TRUST, is weak on at least one coin!



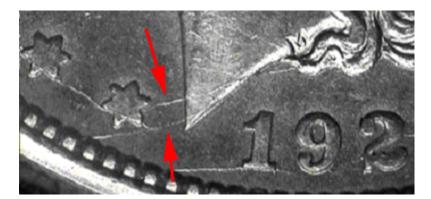
1921-D VAM-1V "Die Break O"

Discovered by Jim Hart, August 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 64P, 63A, 62A, 62A, 60R (Total: 5 MS, 8 Circ.)

Collectors can have a devil of a time finding examples of this die break. Two small breaks emerge from the top of the O in OF to make it appear as if it has small devilish horns. This coin is different than the VAM-1M (Page 35) and VAM-1F (Page 27) die break.



The key to quickly identifying this variety is to look for two parallel die cracks running from the first left star into Liberty's neck. VAM-1M also has horns above the O and thus far has been a little harder to locate than the VAM-1V.





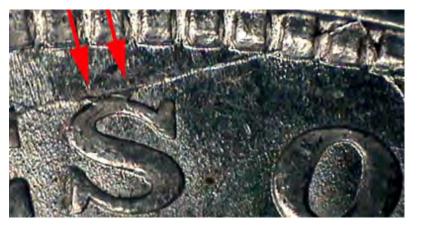
1921-D VAM-1W "Die Break Between B-U"

Discovered by David Close, August 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 61A, 61S, 60A, 60R, 60R (Total: 5 MS, 13 Circ.)

VAM-1W has extensive die cracks running radially along the tops of the letters in the motto, E PLURIBUS UNUM. While it is not unusual for a die crack to appear between the B and U in this motto, this variety was assigned a VAM number because the crack grew into a die break. A long thin break developed and the displaced metal can be seen quite clearly.



In addition to the obverse die break, another break can be found at the top of the second S in STATES. A die crack shoots from the E, runs above the S and impacts the rim. The space between the crack and the top of the S developed into a break and was filled with metal.





1921-D VAM-1X "Rim Cud at E-P"

Discovered by Jeff Oxman, October 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 1 known (pictured below)

VAM-1X is the "King" of 1921-D varieties. It has a humongous rim cud die break at

E-P on the obverse extending down into the tops of letters. There is also small die break in the denticles below the 1 in the date.

An amazing cud is formed above the E and P of E PLURIBUS. 1921-Ds often have a die crack at this position, but on this coin the die actually broke and a piece along the rim fell away. Leroy Van Allen marveled that this is one of the most extreme cuds of the Morgan series. Note that the center of the coin is weakly struck due to the large volume of metal that could escape into the cud location.



There is only one VAM-1X known today. Since

the break is so completely visible, it is unlikely that there are many left undiscovered. This will be one of the "stoppers" in assembling a complete collection of 1921-D die breaks.

Coin courtesy of Jeff Oxman, President of the Society of Silver Dollar Collectors (SSDC)



The cud had no impact on the edge reeding other than the slightly thicker dimension at that point.





An unusual effect on the lettering can be seen on the coin where many of the serifs on the lettering are missing. As shown below, the serifs on the L are incomplete. There is a hint of a serif on the top left of the U and none on the right side of the U. The R is missing its top left serif and the center of the R is weak. On the reverse, the I in UNITED shows the same type of incomplete serif as seen on the obverse lettering.



Another diagnostic

feature that may be useful in identifying EDS VAM-1X coins is the strong crack on the lower obverse. There is a die break below the date running below the neck, through left star number one.





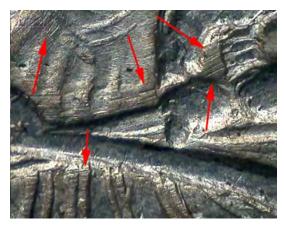
53

1921-D VAM-1Z "No E in We"

Discovered by Rob Joyce, June 2002 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 53R, 50R (Total: 0 MS, 2 Circ.)

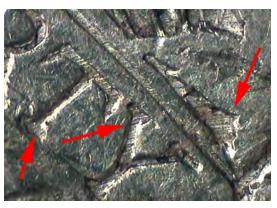
The VAM-1Z is a filled die variety similar to VAM-1A. In this variety, the E of We is almost completely filled, making the letter almost completely invisible. Another "No E in We" coin has been discovered in the VAM-1B2 (Page 23) which can be differentiated because the VAM-1B2 also includes a semicircle die break over the R in AMERICA. Be sure to look for the distinguishing R die break on any missing E coin found.





The coin has extensive die polish. Fine lines can be seen within the eagle's wings, the wreath and bow. Another location polish can be seen is between the eagle's legs as pictured below.

There are also fine die polish lines on the obverse of the coin. These lines can be seen in the low parts of Liberty's hair, through her cap and between the cotton leaves. Pictured below is the polish in and around the letters of LIBERTY.



There are two known VAM-1Z coins. The first appears to be an early die state with the filled die occluding the letter E in We. The second coin is a later die state and the E is roughly half missing. Both of the two known coins are circulated. Below is a comparison of the two die states:



*** Gouge wreath. Also Same as JOH-20. EDS discovery coin no cracks.



1921-D VAM-1AA1 "Die Gouge E"

Discovered by Jim Hart, June 2002 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 64N, 62A, 60S, 58R, 58R (Total: 3 MS, 3 Circ.)

@@@@@ Rework 1aa1

In the VAM-1AA, a diagonal die gouge runs from the denticles up through lower left serif of the E in ONE.

This VAM marked the 27th VAM assignment that fell into the VAM-1 bin. All the letters from VAM-1A through 1Z were used, causing this coin to roll over the VAM nomenclature to VAM-1AA.

There are three other known dies with gouges through the E in ONE. Be sure to also check the VAM-1U (Page 49), VAM-1AK (Page 69) and VAM-1AL (Page 70) to ensure you have the correct attribution. VAM-1U runs up and right, while VAM-1AA runs up and left. The VAM-1AK die gouge is more vertical than this VAM and VAM-1AK crosses through both the N and the E of ONE.

In December 2004, Jack Lee discovered VAM-1AG had the VAM-1AA die gouge on the reverse. VAM-1AA is actually an early die state of VAM-1AG.



_____ 57

1921-D VAM-1AC "Filled R of Trust (T_UST)"

Discovered by Gene Henry, April 2003 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 58A, 50A (Total: MS 0, Circ. 2)

On the VAM-1AC coin, the R in Trust has been filled to the point that the letter is no longer readily visible to the naked eye. The reverse of this filled-die coin has extensive die cracking, easily allowing additional confirmation of the variety.



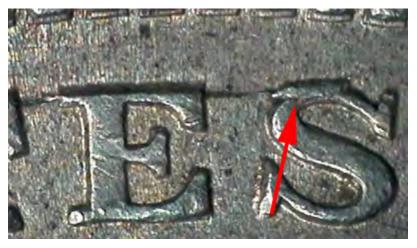
Beyond the filled die feature, there is a small die break present on the second L of DOLLAR.



1921-D VAM-1AD "Beanie S"

Discovered by Jim Hart, 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: N65, 55R, 50R, 45R (Total: 1 MS, 3 Circ.)

In the VAM-1AD variety, there is a die break on top of the 2nd S of STATES. This "Beanie S" break looks like the letter is wearing a small beret. Much like other 1921-D die breaks, this coin has die cracks running along the top edge of the letters



In addition to the die break on the S, the right obverse stars are doubled or tripled.



1921-D VAM-1AE "Die Break Top Inside 2nd S"

The VAM-1AE coin has a small die chip in the top loop of the last S in STATES. This die break is hard to see, but careful hunting of coins with die cracks will allow for discovery of this variety. Additionally, there is another, smaller, die chip on the top of T in states.



VAM Hint:

A stereo microscope is often used by advanced collectors to study die features in detail. While a stereo microscope is not portable like a loupe, it engages both eyes, allowing you to view details in three dimensions. These table-top devices offer the highest quality view of details with a minimum of eye strain. Magnification factors of 5x to 100x are common with 10x and 40x being popular magnification factors for coin work. Some scopes even allow for connection of a digital or film camera. Most of the photos in this book were taken through a stereo microscope with a camera attachment.

1921-D VAM-1AF "Die Gouge D in DOLLAR"

Discovered by Larry Briggs, August 2003 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 63R, 55R (Total: 1 MS, 1 Circ.)

VAM-1AF is another 1921-D die gouge located on the lower reverse of the coin. This variety has the gouge intersecting the D in DOLLAR on the lower right side.



VAM Hint:

One of the first rules that a coin collector learns is that you don't clean coins. Everyone has seen a harshly cleaned coin that contains ugly scratches, ruining the value. In VAM collecting, sometimes very dirty circulated coins are *"ultra rarities."* Gentle soap under warm water will sometimes reduce the crud on a circulated coin to reveal hidden die features. Pat the coin dry (no rubbing) and don't be aggressive. Practice getting the dirt off a couple coins. Experiment on some unimportant coins to make sure you are not adding hairlines or giving the coin an unnatural finish. Remove the dirt, not the toning or any of the natural patina that has grown on the coin.

1921-D VAM-1AG "Die Break 3rd Left Enlarged Star"

Rework 1AA2

This variety has a die break on the third left obverse star that causes the star to be enlarged and misshapen. The bottom point has a blob of metal that doubles its width, making it expand to the point that it is noticeable to the naked eye. The known population of this VAM is small, much like the VAM-1K on page 33. The limited number of coins discovered may be because of the rarity or may simply be the size of the break hidden on the edge of the star.





In December 2004, Jack Lee discovered VAM-1AG had the VAM-1AA die gouge on the reverse. VAM-1AA is actually an early die state of VAM-1AG.



1921-D VAM-1AH "Die Break 1st S in STATES to Rim"

Discovered by Jim Hart, October 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 64P, 50S, 50S, 45R (Total: 1 MS, 3 Circ.)

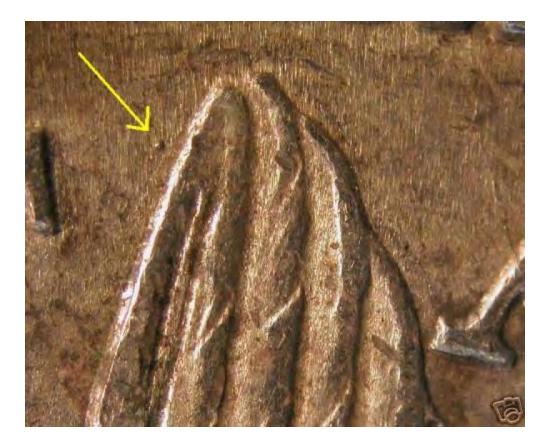
VAM-1AH coins have a small break filling the upper serif on the first S in STATES. Unique cracks can be seen coming off the left side of the S and from the top of the S out to the denticles. A horizontal crack also runs from the S to the T. On nice later state examples, the field area to the left of the S is actually raised above the rest of the coin's field.





On very late die state coins, there is a break in the denticles below the A in DOLLAR.







1921-D VAM-1AI "In God We rust #2"

This variety is the second "In God We rust" variety found on a Denver 1921 die. The coin has the same filled letter T in the motto as VAM-9A (Page 103). The coins missing letters are extremely collectable. Even people that do not collect die varieties on coins can appreciate the impressive visual of a partial word like "rust". Pull out a missing letter VAM and you are sure to find interested viewers.



The circulated discovery coin of VAM-1AI did not show any significant die markers that could be used to attribute other examples.



1921-D VAM-1AJ "Die Scratch Between O-F"

Discovered by Rob Joyce, August 2003 (Desirability: $\bigstar \bigstar \diamondsuit \diamondsuit$) Condition Census: 50S (Total: 0 MS, 1 Circ.)

This variety has a small diagonal die gouge on the reverse between the O and F in OF. The gouge is long and thin, visible only at the right viewing angle.





VAM Hint:

Several of the third party grading services have embraced the VAM community and will put VAM numbers on their coin holders. Some companies will even research die varieties on unattributed coins for a small fee. The grading services have a growing awareness of die varieties and, as a community, are gaining experience with attributing VAMs.

Even though the grading services offer a professional opinion by labeling the VAM, sometimes errors are made. Don't assume that because a coin is certified by a third party grading service that the VAM attribution is correct. It usually is correct...but not always.

1921-D VAM-1AK "Vertical Die Gouge E of ONE"

Discovered by Rob Joyce, August 2003 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 63N, 62S, 62R, 62R, 50R (Total: 4 MS, 1 Circ.)

VAM-1AK can be attributed by locating a small vertical die gouge at the top left of the E in ONE. This reverse gouge is broad and shallow, and will be hard to locate on worn, circulated coins.



This variety is the fourth 1921-D discovery of a die gouge passing through the E in ONE. The other gouges are VAM-1U (page 49), VAM-1AA (page 56) and VAM-1AL (page 70).

In May 2005, Larry Galbraith noticed that there is a dot above the 1 in the date. Add photo and replace obverse line drawing (done)



VAM Hint:

VAM collecting is really about the thrill of the hunt. Searching for unusual coins undiscovered within batches of common coins can provide quite a charge. Purchasing a totally unique coin because you've taken the time to learn about its true rarity and value sets VAM collectors apart from those that simply "purchase" coins.

1921-D VAM-1AL "Die Gouge NE of ONE"

VAM-1AL is another die gouge on the lower reverse of the 1921-D Morgan dollar. This particular gouge is quite long and is second in length only to the VAM-1U (Page 49).



Coin courtesy of John Kohut.

In examining this coin, Leroy Van Allen noted there appears to be doubling and tripling of the stars and date on this coin. Dark toning prevented him from accurately describing the doubling and assigning a VAM number based on the doubling. This coin will likely be reclassified with a new number when a clear example can be found.



1921-D VAM-1AM "Small Break D in UNITED"

Reattribution find by Paul Piece, December 2003 (Desirability: $\bigstar \diamond \diamond \diamond \diamond \diamond \Rightarrow$) JOH-10 discovered by Rob Joyce, December 2001 Condition Census: 63R, 50R (Total: 1 MS, 1 Circ.)

The JOH-10 coin contains numerous die cracks on the obverse and reverse. The most unique crack is above the A in STATES extending to the right. The shape of this break resembles an early die state of the VAM-10 break on page 39. The cracks above the A are also similar, but quite the same as JOH-9 (Page 112). Finally, there is also another variety with cracks above the A in STATES in JOH-13 (Page 115). The area above the A is not raised like the VAM-1B1 capped R break,



but the metal within the break is at a slightly different level and slows different flow lines than the field.

In very late die states of JOH-10, the D in UNITED has a spur coming off the top as the result of a small die break.

LDS coin courtesy of Paul Pierce

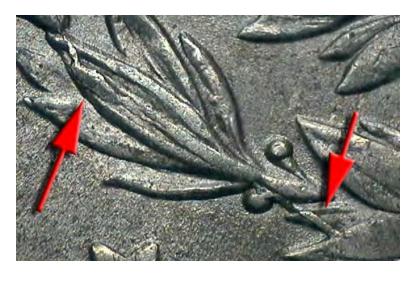




1921-D VAM-1AN ""

Discovered by John Kohut, February 2004 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 64PL-N, 65N, 55R (Total: 3 MS, 1 Circ.)

1921-D VAM 1AN - Same reverse as VAM 12A with major break on third left leaf cluster, but almost no doubling on obverse.





1921-D VAM-1AO "No D in God"

VAM-1AO



19`21-D VAM-1AP "No W in We"

Discovered by Mike Emswiler, March 2003 (Desirability ★★★☆☆) Condition Census: 58PL-R, 58PL-R, 55R (Total: 0 MS, 3 Circ.)

VAM-1AP Die fill in W in We removing almost the entire letter.



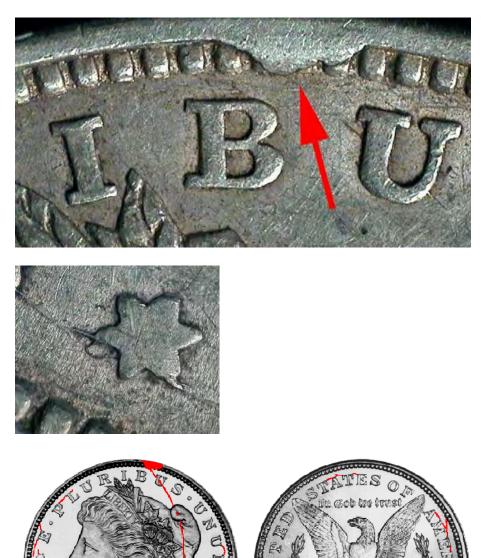
VAM Hint: EDS not as desirable as LDS Check both sides of a coin Join SSDC



1921-D VAM-1AQ "Rim Cud at 12:30"

Discovered by Rob Joyce, March 2003 (Desirability $\uparrow \uparrow \uparrow \uparrow \uparrow \uparrow$) Condition Census: R (Total: 0 MS, 1 Circ.)

VAM-1AQ



10

1921-D VAM-1AR "Die Break Top Left of M Extending Left"

JOH-5 Discovered by Jim Hart, 2001 (Desirability: ★★☆☆☆) John Wilson discovered a late die state assigned VAM-1AR in March 2004

Condition Census: 60R, 60R, 50R (Total: 2 MS, 1 Circ.)

The VAM-1AR die variety has die cracks outlining an area above the M in AMERICA. In late die state specimens, this outline has cracked away and is tilted at a different angle to the field of the coin. In the first printing of "Fun with 1921" a challenge was issues to discover an example worthy of a new VAM assignment. John Wilson stepped up to the challenge and found a nice break that Leroy Van Allen designated as "worthy of listing."



Congratulations John! This coin is remarkably similar to VAM-1L (Page 34) and may be confused as an early die state of that VAM. There is extensive die cracking above the M in AMERICA extending up and left. It is interesting that the die made almost identical cracks as in the VAM-1L. Cracks elsewhere on the die may be used to differentiate the two die varieties.

The crack between the I and the C of AMERICA may be used to uniquely identify the VAM-1AR coin. The crack on a VAM-1AR is below the top of the I, forming a relatively straight line. On a VAM-1L a similar crack appears but is level with the top of the I and



bows slightly upward. Relative to VAM-1L, this variety has a lower crack.

Very late die states have an elongated first star to the left of the date. Note that late die states with a break above the M and the obverse star die break are much more desirable than coins with simply a crack outline over the M in AMERICA.



1921-D VAM-1AS "Die Break 3rd left Star"



1921-D VAM 1AS -- Die break on 3rd left star similar to 1AG, breaks on bottom of 92 in date.



1921-D VAM-1AT "Jet O"

Discovered by Rob Joyce, May 2004 (Desirability $\bigstar \bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 63R, (Total: 1 MS, 1 Circ.)

Condition Census: 62S, 58R, 55?A (Total: 1 MS, 2 Circ.)

Easily the most interesting die break to emerge since the first edition of "Fun With 1921" emerged, VAM-1AT is a highly desirable variety. This unique variety has a huge break on the O of ONE. The lower left side of the O has a protruding break. It appears that the VAM-1AT variety had a very short-lived production run after the break occurred. This coin went undiscovered for the years of research preceding the first edition of "Fun With 1921." Even with the army of VAM collectors working on 1921-D varieties, only three examples has been found in several years of study. The extensive die cracks on the obverse and reverse combined with the lack of other examples indicates this die was probably retired almost immediately after breaking.

There is a unique die crack on the reverse forming an intersection between the O an F of OF. (More text to be added @@@@)





1921-D VAM-1AU "Die Gouge N of ONE"

Discovered by John Kohut?, May 2004 (Desirability $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 63R, 45R (Total: 1 MS, 1 Circ.)

(More text to be added @@@@)

This variety has a long, thin die gouge through the lower right of the N in ONE proceeding upward to touch the corner of the E. The VAM-1AU die gouge has proven to be very elusive with only two coins reported in the years since 1921-Ds became a hot VAM collectable. More will surface but the author believes this will continue to be a tough coin to find.



In addition to the die gouge on the reverse, there is a small die break on the bottom of the 9 in the date.



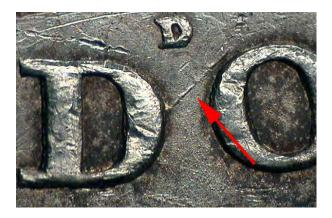


1921-D VAM-1AV "Die Gouge D to O Of Dollar"

Discovered by Jack Lee, July 2004 (Desirability ★★☆☆☆) Condition Census: 45R, 35R (Total: MS, 2 Circ.)

Thin, diagonal die gouge from the middle of the outside of the loop of the D to the top of the O in DOLLAR.

(More text to be added @@@@)

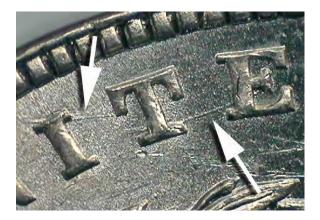




1921-D VAM-1AW "Gouges ITE of UNITED"

Discovered by Jack Lee, July 2004 (Desirability ★★☆☆☆) Condition Census: 55R, 50S, 35R (Total: 0 MS, 3 Circ.)

Several thin, horizontal die gouges among ITE of UNITED.





1921-D VAM-1AY "Die Scratch ICA"

Discovered by John Kohut, August 2004 (Desirability rightharpoondown condition Census: 64N, 64A, 61PL-S, 58R, (Total: 3 MS, 1 Circ.)

Thin, diagonal die gouge through ICA in AMERICA. The gouge is a very straight line. Several die gouges have been located in the lower reverse area of 1921-D coins, but this is gouge is outside that typical area. Located in an unusual position, this is the only known gouge in the neighborhood of AMERICA.

If you run into a proof-like Denver Morgan dollar, check to see if it contains this die gouge. There are few Denver dies polished to the point they would produce proof-like dies and this particular VAM appears to be one of those limited few.

(More text to be added @@@@)



Study coins courtesy of John Kohut, Jerry Robertson and Jack Lee 64 DPL heritage unattributed S/N 157436-010 sold for \$

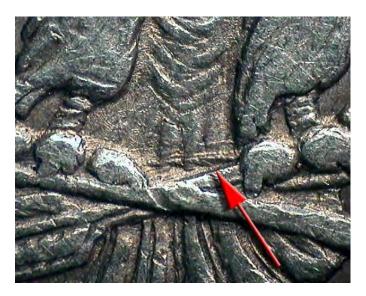


1921-D VAM-1AZ "Gouges Tail feathers and Bow"

This variety has multiple gouges in the lower center of the coin. There are a series of gouges in the tail feathers of this variety. Additionally, there is a small die gouge next to the wreath bow. The left side (as viewed) of the eagle's tail feathers are also polished away above the olive branch, leaving swirling polishing lines in its place. While these polishing swirls are



present on some other 1921-D coins, this could be an important pick-up-point when looking for the hard to see VAM-1AZ die gouges.





1921-D VAM-1BE "Filled E DO of ONE DOLL"

Discovered by John Kohut, November 2004 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 50R damaged (Total: 1 Circ.)

The reverse of VAM-1BE is has an enormous filled die. The D of DOLLAR is completely missing. The E of ONE, the O of DOLLAR and the mintmark are all weak. Even the wreath was hit by this striking error and is weak as well.



1921-D VAM-2A "Doubled Date, Die Gouge In O"

Discovered by Martin Field, August 1980 (Desirability: ★★☆☆☆) Condition Census: 64A, 55R, 55R Scratched (Total: 1 MS, 2 Circ.) *

* This condition census appears much too small. It is believed this coin is not as rare as the census indicates.

The VAM-2A die gouge contains a diagonal die gouge within the O of DOLLAR. At some point in this die's use, something scratched the inner recess of the O, leaving a telltale mark on all subsequently produced coins. This variety is is one of the older reported 1921-D varieties yet it had a limited number of known coins when "Fun With 1921" was first published. The location of



the small, well hidden, die gouge was probably the reason few are reported. Since the army of VAM collectors began scrutinizing their 1921-D coins, more have emerged, but certainly less than many of the other 1921-D VAMS.

The date, like other VAM-2 coins, is doubled along the tops of the 92 in the date.





1921-D VAM-2B "Doubled Date, Die Break M"

VAM-2B is characterized by a die break at top left of M in UNUM on the obverse of the coin. A large amount of metal is pushed into this break, making this variety a nice example of a characteristic 1921-D die break. Since the publication of "Fun With 1921" this coin has emerged as one of the tougher coins to



locate, especially in mint state condition. Late die state coins with the raised metal over the M, rather than just an outline, are much more desirable.



This die break variety is a sub-class of VAM-2 because the date is doubled at the top left of digits.



The reverse of VAM-2B has a small die break forming at top left of the second S in STATES. This unusual break makes the S appear to have a

wild spike emerging from the top. If you are using this feature to identify the coin, be sure to also check VAM-5A, Page 94, which has a different die break between the ES of STATES.



—— 91

1921-D VAM-3A "Wing Break, Dot Next To Wing"

Confirmed by Rob Joyce, February 2002 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 63A, 63A, 63R, 62R, 55R (Total: 4 MS, 8 Circ.)

VAM-3A is characterized by a heavy die break at the top of the Eagle's right wing extending into the denticles above the S in STATES. The large VAM book⁴ had a photo of the VAM-3 with this die break on the wing but the assignment for the die break version as VAM-3A was not formally made until



2002. The die break pictured above is huge, and represents one of the most desirable of all the 1921-D die breaks.

In addition to the die break, there are several small, circular, raised dots on the coin. The most prominent one is located on field next to eagle's right wing, in the middle of eagle's left wing next to body. There are dots located in the upper loop of the S of STATES, in the middle of sixth tail feather (counting from the right), and above and below the stem right of the first berry in left wreath. Dots can also be located on the

obverse, below the eye, and two in hair between the ear and the date.

Pictured to the right is one of the mysterious 1921 dots, appearing below the eagle's right wing. Opinions on the origin of the dots range from hardness tests on the die, to markers identifying a specific die. One theory holds that they are the result of inferior die steel, with bubbles trapped in the steel, not made on purpose. These strange dots are found a few 1921 dies and can be located on coins produced at each of the three mints. Rare and elusive, 1921



coins with these dots will likely rise in value as more collectors pursue them.

⁴ The Comprehensive Catalog and Encyclopedia of Morgan & Peace Dollars, By Leroy C. Van Allen & A. George Mallis (Worldwide Ventures, Inc. 3107 Edgewater Dr., Orlando, FL 32804, Fourth Edition 1997)

The VAM-3A has a die crack above the A in STATES that is similar to several other 1921-D varieties.





VAM Hint:

The real key to finding die varieties is to look at a lot of coins. The very nature of die varieties is that they are unusual coins, not within the normal specifications of the production run. A collector needs to examine many coins to find unique and different varieties. The more coins you look at, the better your chances of finding a rare variety. Have faith, the really cool coins are out there to be discovered. Remember: quantity, quantity, quantity.

1921-D VAM-5A "Die Break ES"

Formerly VAM-1Y VAM-1Y Discovered by Jim Hart, November 2001 (Desirability: ★★★★☆) VAM-5A reclassification find by Logan McKechnie, July 2003

Condition Census: 60A, 58R, 55R, 50R, 50R (Total: 1 MS, 7 Circ.)

VAM-5A has die breaks at the top left of the E and the second S in STATES along with a die crack at the top of TATES OF. Similar to the VAM-2B Die Break (Page 90), the VAM-5A also has heavy die cracks at top of MERIC.







1921-D VAM-6A "Stretched Star- 3rd Left Star"

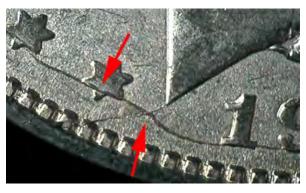
Formerly JOH-2 and VAM-1AS Reclassification find by Logan McKechnie, April 2004 (Desirability: ★★★☆☆) Formerly JOH-2 Discovered by Rob Joyce, December 2001 Formerly VAM-1AS Discovered by Jack Lee, March 2004 Condition Census: 63PCI, 61R, 58R, 55R, 55R (Total: 2 MS, 7 Circ.)

This coin has a die break on the third left star, stretching the top left point twice the normal length. Considered by the author as a very interesting break, it is hard to see with the naked eye, but quite striking when viewed with magnification.

The VAM-6A designation was defined when Logan McKechnie discovered doubling on the bottom of the letters UNITED STATES OF AMERICA towards the center of the center. The variety also has very slightly tripled left stars towards rim.



A die crack also goes through the first left star from the neck and forms an X. VAM-2B (Page 88) also shows a similar X below the neck.





1921-D VAM-7 "Doubled Ear, Left Stars + UNITED STATES"

Discovered by Herb Zepke, August 2000 (Desirability: $\bigstar \bigstar \diamondsuit \diamondsuit$) Condition Census: 62A, 62R, 55R, 45R, 35R (Total: 2 MS, 3 Circ.)*

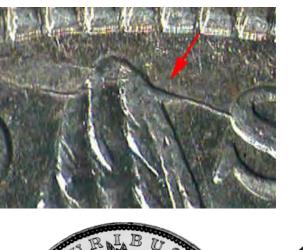
*The fact that VAM-7 is not differentiated with a sub-identifier for the coins with a die break makes the population report inaccurate.

The VAM-7 variety has a slightly doubled lower right inside ear. Additionally, all of the left stars are doubled toward rim as is the lower edge of top crossbar of both 1s in the date and the first two right stars.

Some examples show heavy die cracks along the top of the letters TED, extending to the right wing tip with a small die chip on right side of wing tip. Coins with this die break are the only specimens counted in the Condition Census above. The combination of the doubled die and the wing break make this coin harder to locate than VAM-



7s with only doubling. If the die break were larger, this coin would be much more sought after, but unfortunately, it is a minor variety.





1921-D VAM-8A "Flag R"

VAM-1C Discovered by Crae Morton, May 1998 VAM-8A, Jeff Oxman discovered doubling, Mar 2001. (Desirability: ★★★★☆) Condition Census: 64A, 63A, 63A, 62A, 62A (Total: 6 MS, 16 Circ.)

VAM-8A has a prominent die break above the R in AMERICA. The break is triangular, forming a small flag on top of the R. Additionally, the obverse stars to the left of the date are doubled and the reverse is doubled slightly around UNITED STATES.

This variety is sometimes confused with the VAM-1B1 break (found on page 20), which occurs in the same location above the R. Several examples of VAM-8A,



misattributed as the more widely known VAM-1B1, have come to light, even on coins in professionally certified holders. Unlike the triangular VAM-8A die break, VAM-1B1 is a rounded semicircle. The two are easily differentiated when reference photos of both are available.

As in all VAM-8 1921-D coins, the left stars are doubled. This die pair was extensively polished. There are lines in Liberty's hair, even lines on the cheek of the coin.



@@@ Hair armpits. There is also a large die gouge in the Eagles left wing of the VAM-8A.





1921-D VAM-8B "Gouged Wreath"

Discovered by William Scholl, July 2003 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 63(slab which, ask john K), 50R, 50R (Total: 1 MS, 1 Circ.) (@@@@@@@@@@ John K noticed between eagles legs/claws also need to check) verified on rob's coin

The VAM-8B variety is differentiated by the horizontal die gouge emerging from the right side of the wreath bow.

Several other die gouges have come to light in the 1921-D series (see table 3 on page 16). Almost all of these gouges are located on the lower reverse of the coin. The reason for the concentration of gouges in this area is an interesting mystery warranting additional research into the production methods that led to the grouping of defects in this region.

As an offshoot of the VAM-8 die, the stars to the left of Liberty are doubled and the right stars are slightly tripled. The reverse shows slight doubling around UNITED STATES that shows the same hub doubling as on VAM-6.







On the reverse of the VAM-8B there is also a

small die break within the G of God. The fact that there is a die break, die doubling and a die gouge, all on the same coin, makes this a desirable variety.

According to Leroy Van Allen, breaks within the motto of Morgan dollars occur with enough frequency that they are not considered significant variety features by themselves. The steep and sharp edges of the lettering caused them to be susceptible to chipping.

@@@@@late die state photo of chip over E and revised cracks.

This VAM also has die gouges within the tail feathers. These gouges are often easier to see than the wreath gouge so when hunting VAM-8B's look for these markers first, and if they are present then check for the fainter wreath gouge. Note that these gouges are different than the VAM-1A2 gouges.

This variety changes slightly over time. Very early die states with no die cracks on the obverse have faint die gouges in multiple locations including this faint die gouge through the AT of STATES.

As production went on, die cracks emerged on the obverse and reverse. The very late die state photo of chip over E of STATES. At this point, the faint die gouges outside the wreath and the tail feathers have all been polished away.

This variety comes in a variety of die states. Ones produced early in the die life have no die cracks. The late die state has lots of obverse and reverse die cracks, the small chip above the E in STATES and a retained cud forming above the ES of STATES. All states of the VAM-8B, even those without visible die cracks, have a small break in the G of God on the reverse. According to Leroy Van Allen, breaks within the motto of Morgan dollars occur with enough frequency that they are not considered significant variety features by themselves. The steep and sharp edges of the lettering caused them to be susceptible to chipping.

When using the identification drawing below, remember EDS coins have no die cracks, only the gouges and the break in G of God.

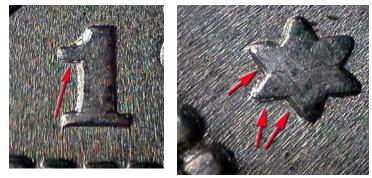


1921-D VAM-9 "Doubled Date, Tripled Left Stars"

Discovered by Jim Hart, August 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 58R, 58R, 55R (Total: 0 MS, 3 Circ.)*

*The fact that the die break on VAM-9 coin is not assigned a unique identifier makes this condition census inaccurate as it only contains the known die break coins.

This VAM is characterized by a uniquely doubled date with both crossbars of the 1's doubled at the bottom. The 9 and the 2 of the date are doubled at top inside of both loops. Also, all the left stars are slightly tripled toward the rim.



The first right star and E are also slightly doubled toward rim. Liberty's head and nose are also slightly doubled.

For die break collectors, late die states have a small die break that extends out of the right side of the top serif in the first S of STATES. In another interesting combination of doubling and die breaks, this coin is much like VAM-7. If the die break was larger, it would have been assigned a unique VAM number and been more desirable.





1921-D VAM-9A "In God We rust – Filled Die"

Discovered by Gene Henry, April 2002 (Desirability $\bigstar \bigstar \bigstar \bigstar \bigstar$) Condition Census: 63R, 50R (Total: 1 MS, 1 Circ.)

This filled die variety is missing the T of Trust, making the motto read "In God We rust." Some have questioned why the motto on the 1921-D had so many clogs causing missing letters. In an email to the author, Leroy Van Allen offered the opinion that the small letters with steep edges made it an easy place for grease to trap. He also noted that he has observed that the motto is also prone to die chips and he feels the same steep edges are responsible for that phenomenon as well.



In addition to the filled letter T, the coin shares the features of a VAM-9: The date is doubled with both crossbars of the first and last one doubled at the bottom. The "9"

digit is doubled at the top inside of both loops. The digit "2" is slightly doubled at top inside of upper loop and at the bottom of the upper ball. All the left stars are slightly tripled toward the rim. The first right star and the E of E PLURIBUS are slightly doubled toward the rim. Liberty's head and nose are also slightly doubled. Finally, there is a diagnostic die chip within Liberty's mouth.





1921-D VAM-11A "Missing We in Motto"

Discovered by Logan McKechnie, July 2003 (Desirability: $\uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow$) Condition Census: ?? (Total coins: 1)

A late discovery, this coin was unavailable for study or photography before the book went to press. It is yet another example of a filled die within the reverse motto on the 1921-D coins.

On this variety, both 1's in the date are doubled below the upper crossbar. The 9 is tripled at the bottom outside of the upper loop and the 2 is tripled at bottom of the upper ball. All the left stars are doubled while the right stars are tripled or quadrupled towards the rim. VAM-11A is differentiated from VAM-11 because there is a die fill in the motto, almost totally eliminating the word We.



1921-D VAM-12A "Wreath Break"

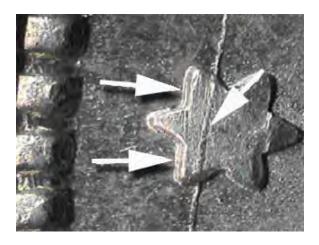
Discovered by John Baumgart and John Kohut, Oct. 03 (Desirability $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 50R, 50R, 35R (Total: 0 MS, 3 Circ.)

VAM-12 has the obverse doubling of the date and profile as well as tripled left stars. The VAM-12A die break is tucked away in the middle wreath cluster of the left wreath. A substantial amount of metal is pushed up out of the wreath where the die broke. Extensive cracking can also be seen on both the obverse and reverse of the coin.



Even though this variety has a good-sized break, it took quite a while before an example was discovered. Without careful examination, the break appears to be part of the leaf. This is a hard VAM to notice if you are not specifically looking for it.

The photo below shows the tripling of the 3^{rd} left star along the outer edge. Also notice the unique die crack that goes all the way through the star.



Coin courtesy of John Baumgart.



1921-D VAM-14 "Filled D, Tripled Obverse Stars"

Discovered by John Kohut, Oct. 03 (Desirability $\bigstar \bigstar \diamondsuit \diamondsuit$) Condition Census: 63P, 50R (Total: 1 MS, 1 Circ.)

The most interesting VAM-14 specimens have a filled mintmark making it almost totally invisible without magnification.



On all VAM-14 specimens the left stars are tripled or quadrupled and the stars to the right of the date are doubled or tripled towards rim.



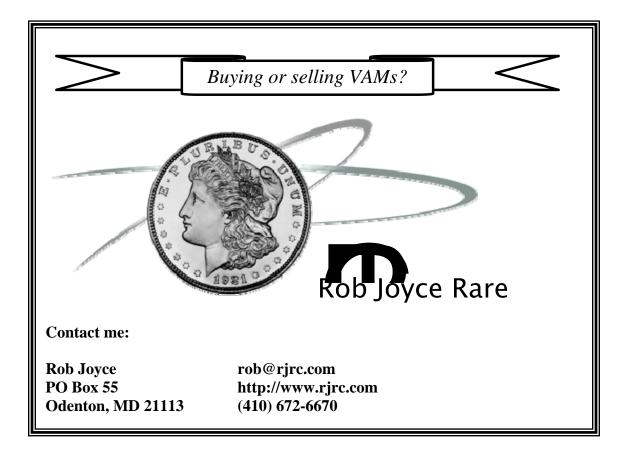


JOH Numbers

The following coins are additional unique varieties that were not quite significant enough to warrant a VAM assignment. It was, however, important to be able to recognize these coins for research purposes and catalog their discoveries. In the same manner as Leroy Van Allen and George Mallis coined the term VAM from the initials of their last names, Rob Joyce and Jim Hart catalog these with JOH numbers. The abbreviation JOH is pronounced "Joe" when referring to the coins.

Over time, JOH numbers were assigned using a one-up numbering system. You will notice that several gaps exist today in the series as these varieties were found with slightly later-state die breaks and formally assigned a VAM number. JOH Numbers JOH-1, JOH-4, JOH-6, and JOH-7 no longer exist. Check your JOH varieties, and if you find one with a break that has advanced beyond the state pictured in this book, it may be worthy of a VAM assignment as well.

The known population of many JOH varieties are often less than 5 coins for any single variety. This small population is a product of many factors. By definition, the features of a JOH coin are less pronounced than coins that were assigned a VAM number. These less noticeable features mean fewer coins were identified as unusual by casual collectors.



1921-D JOH-3 "Die Break O of ONE"

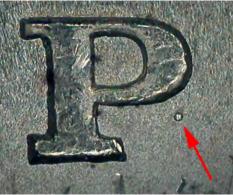
Discovered by Rob Joyce, December 2001 (Desirability: $\bigstar \diamond \diamond \diamond \diamond \diamond$) Condition Census: 63R (Total: 1 MS, 0 Circ.)

On the JOH-3 variety, the lower right side of the O in ONE has a small die break. Because the metal displacement is so tiny and insignificant, this coin was not assigned a VAM number.



This 1921-D also has an unexplained, round dot next to the P in PLURIBUS.

In addition to the other features, extensive cracking can be found around the eagle's right wing.





1921-D JOH-8 "Die Break 2 of 1921"

Discovered by Rob Joyce, Feb 2002 (Desirability: $\bigstar \diamond \diamond \diamond \diamond \diamond$) Condition Census: 45R (Total: 0 MS, 1 Circ.)

JOH-8 contains two minor die breaks, one on the obverse, and one on the reverse. The first is a die break present within in the lower portion of the 2 in the date.



The D in United also has a small break forming along the top. Both breaks are interesting, but less important than many of the other 1921-D varieties.





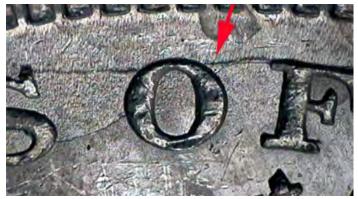
1921-D JOH-9 "Die Cracks Above A in STATES"

Discovered by Rob Joyce, February 2001 (Desirability: $\bigstar \diamond \diamond \diamond \diamond \diamond$) Condition Census: 62R, 55R, 55R, 50R, 50R (Total: 1 MS, 4 Circ.)

This coin has extensive die cracking on the obverse and reverse but not die breaks (on any known pieces). The most unique crack is above the A in STATES. This looks like an early die state of VAM-10 (Page 39), but is not. When attributing this variety, be sure to check the cracks above the A very carefully against JOH-10 (Page 71) and JOH-13 (Page 115), which are very similar.



Die cracks also outline a horn on the O in OF. No examples have been found with a late die state break having displaced metal.





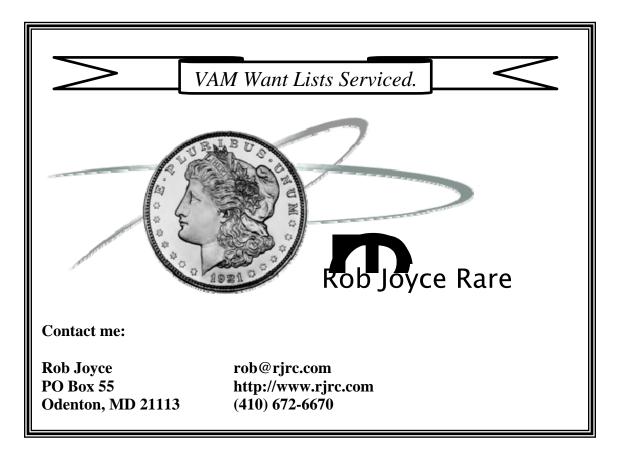
1921-D JOH-11 "Die Cracks Reverse ED of UNITED"

Discovered by Jim Hart, December 2001 (Desirability: $\bigstar \Leftrightarrow \Leftrightarrow \Leftrightarrow \Leftrightarrow$) Condition Census: 50R (Total: 0 MS, 1 Circ.)

The JOH-11 has obverse and reverse die cracks, none of which advanced to the point that die breaks developed (at least on known examples). The distinguishing characteristic is a perpendicular crack on the reverse between the ED of UNITED.

Dot in ear. (longer cracks? Check ref PCGS 64)





1921-D JOH-12 "In God We __ ust"

Discovered by Rob Joyce, February 2001 (Desirability: $\bigstar \bigstar \bigstar \bigstar$) Condition Census: 50R, 45R, (Total: 0 MS, 2 Circ.)

In yet another example of a filled die in the word Trust, this variety has two missing letters. Because they are only partially filled, a VAM number was not assigned. The coin is still very desirable, showing only "ust" where the word Trust should be. If you are persistent enough to locate a coin with the Tr completely missing and you can be the proud owner of a brand new VAM designation!



VAM Hint:

Collect what you like. All coin collectors find areas of numismatics that interest them. Some enjoy collecting by date, others work on type sets. VAM enthusiasts are advanced collectors that study die varieties and appreciate the true rarity associated with some of these coins. Regardless of the rarity and value offered by these VAMs, collectors should still focus on what interests them. The author enjoys collecting die breaks and filled dies. Other VAM collectors are captivated by doubled dies or die gouges. Still others find micro O coins or long-nock 1878-S varieties fascinating. Start with what you like and chances are good you will form a unique collection that will grow as your knowledge and interest expands. Collecting what you like will keep you interested, consistently improve your collection and provide lots of enjoyment.

1921-D JOH-13 "Die cracks Above A in STATES, Liberty's Cap"

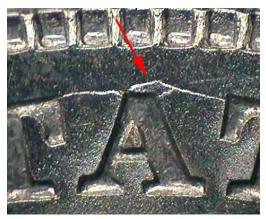
Discovered by Jim Hart, 2001 (Desirability: $\bigstar \diamond \diamond \diamond \diamond$) Condition Census: 58R, 55R, 50R, (Total: 0 MS, 3 Circ.)

@@@@@ (die breaks VAM-2LDS? Check date and star doubling) Paul Pierce

This coin, JOH-13, has extensive die cracking on the obverse and reverse but no die breaks (on any known pieces). The most noticeable crack is above the A in STATES

extending to the right. This looks like an early die state of VAM-10 (Page 39) but is not. The cracks above the A are similar but still different than JOH-9 (Page 112). There is yet another variety of cracks above the A in STATES in JOH-10 (Page 71).

The most unique feature used to identify this variety, VAM-13, from the other similar coins, is the die crack that runs from the denticles through the back of Liberty's cap.







1921-D JOH-14 "Die Break Neck"

Discovered by Jim Hart, 2001 (Desirability: $\bigstar \diamond \diamond \diamond \diamond \diamond$) Condition Census: P64, 55R (Total: 1 MS, 1 Circ.)

In this variety, a crack on Liberty's neck has advanced to the point that a small amount of metal expanded into a break. Hard to find because of the size, it takes eagle eyes to locate a VAM like this!



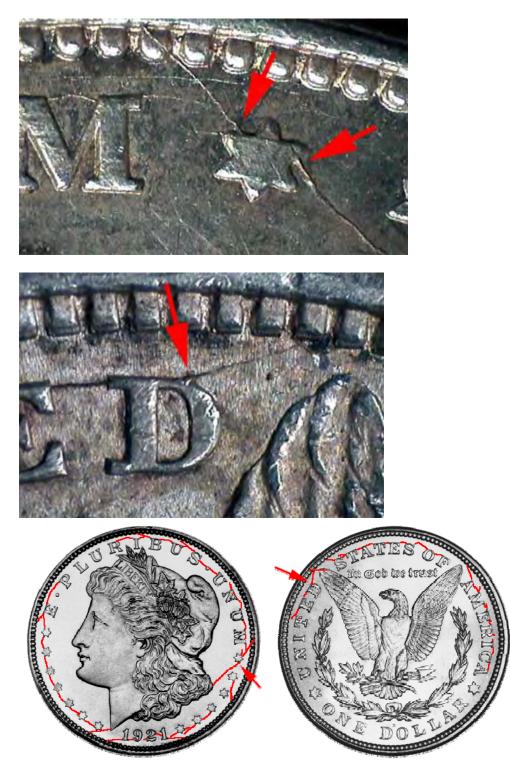
In addition to the break on the obverse, there is a small die break on the bottom left serif of the second L in DOLLAR.



1921-D JOH-15 "Sm. Breaks 6th Right Star, D UNITED"

Discovered by Paul Pierce, Oct. 2002 (Desirability: ★☆☆☆☆) Condition Census: (MS)R, 55R, 45R (Total: 1 MS, 2 Circ.)

JOH-15 has two small die breaks, one on the sixth right obverse star and the other on the reverse at the top of the D in United. Unless examples with much more advanced breaks are found, this will remain one of the lesser 1921-D varieties.



1921-D JOH-16 "Bean-Bottom S"

This variety has a small bean-shaped die break in the lower portion of the second S in STATES. This die failure is very similar to the VAM-1AE die break (Page 61) which has a break inside the top of the same letter.



1921-D JOH-17 "Weak God"

This JOH has a large filled die that consumes several letters in the motto. The D of God is almost obliterated, and the rest of God is very weak. There are several VAMs and JOH numbers with a single missing letter. This variety is missing almost a whole word!



VAM Hint:

Many collectors don't understand die varieties or know what VAM collecting is all about. Consider giving a talk at your local coin club and sharing your collection, knowledge, and interest in unusual die variety coins. Even talking to a few friends about strange coins you've discovered can be quite rewarding and useful to them.

1921-D JOH-18 "Die Break 1 in Date"

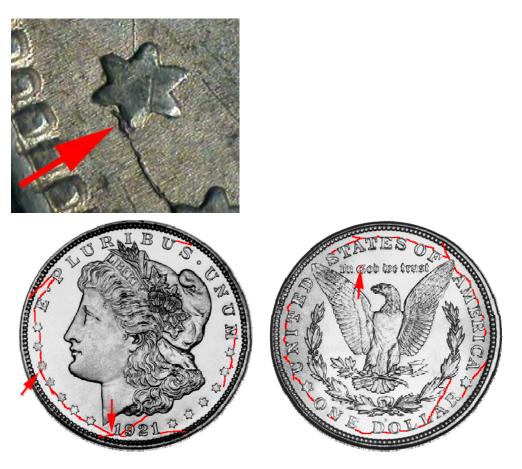
Discovered by John Baumgart, October 2003 (Desirability: $\bigstar \diamond \diamond \diamond \diamond \diamond$) Condition Census: 55R (Total: 0 MS, 1 Circ.)

The JOH-18 die has a small break at the lower left of the 1 in the date.



Coin courtesy of John Baumgart.

The 5th left star has a small break on the outside toward the denticles. In addition to this break, the die has a small break in the G of God as well as quite a few interesting die cracks. No major breaks are found on this coin but perhaps there is a later die state lurking out there?



1921-D JOH-19 "Die Break 3rd Left Star"

Discovered by William Scholl, January 2004 (Desirability: $\bigstar \bigstar \diamondsuit \diamondsuit$) Condition Census: 61R (Total: 1 MS, 0 Circ.)

The JOH-19 coin has extensive cracking on the obverse and reverse. On the obverse, there is a small die break on the 3rd left star. This break is different than VAM-1AG and JOH-2 which also have breaks on the same star. The die crack continues across the surface of the 2nd left star.



The date also has lots of die cracks running throughout the numerals.



Finally, a small break has developed between the letters A and M of AMERICA.





1921-D JOH-20 "Die Break Over R"

Discovered by Jack Lee, January 2004 (Desirability: $\bigstar \bigstar \bigstar \bigstar \bigstar 2$ stars? Condition Census: 58R, 45R (Total: 0 MS, 2 Circ.)

(@@@@Gouge in wreath also....)









1921-D JOH-21 "Weak n of In"





1921-D JOH-22 "Small break above M"

Discovered by Jack Lee, January 2004 (Desirability: ★☆☆☆☆) Condition Census: 58R, 55R (Total: 0 MS, 2 Circ.)







1921-D JOH-23 "Extensive cracking"

Discovered by Bill Fivaz, April 2004 (Desirability: $\bigstar \diamond \diamond \diamond \diamond$) Condition Census: 63R, (Total: 0 MS, 0 Circ.)

JOH-23 was struck from an extensively cracked set of dies. Although none of the cracks advanced to the point that a more sizable die break appeared, the quantity of cracking is interesting.





1921-D JOH-24 "Small Bread D United #2"

Discovered by John Kohut, March 2004 (Desirability: $\bigstar \diamond \diamond \diamond \diamond$) Condition Census: 58R, (Total: 0 MS, 1 Circ.)



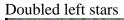


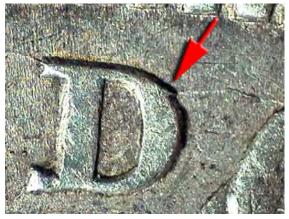
1921-D JOH-25 "Small Breaks D, S and S"

Discovered by Jerry Robertson September 2004 (Desirability: $\bigstar \diamond \diamond \diamond \diamond$) Condition Census: 50R, (Total: 0 MS, 1 Circ.)

This coin has quite a bit of cracking around the obverse and reverse periphery. It is unusual in that it has three different letters showing small die breaks. The D of UNITED and the first S of STATES both have small breaks on the top of the letters. The second S in STATES has a small break in the lower curve much like JOH-16, the "Bean-Bottom S" variety.











1921-D JOH-26 "Soft D in DOLLAR

Discovered by Rob Joyce July 2004 (Desirability: $\bigstar \diamond \diamond \diamond \diamond$) Condition Census: xR, 55R, xR (Total: 0 MS, 3 Circ.)

This coin has quite die fill D DOLLAR Clip

1921-Ф ЈОН-27"

Discovered by x October 2005 (Desirability: $\bigstar \diamond \diamond \diamond \diamond \diamond$) Condition Census: 58P (Total: 0 MS, 1 Circ.)

????



1921-D JOH-28 "Break in Denticles above D UNITED"

Discovered by Gress Oct 2005 (Desirability: $\bigstar \diamond \diamond \diamond \diamond$) Condition Census: XF R (Total: 0 MS, 1 Circ.)

Small die break in denticles above D in UNITED. Another very small break between right wingtip and A of AMERICA in denticles.

Small extension of metal on the 5th left obverse star.



Die Break Line Drawings

These drawings are useful for the identification of coin varieties. By examining the die breaks on a coin and comparing them to the line drawings on these illustrations, it is possible to identify even early die states of the die breaks. Remember that die breaks usually represent the very last strikes of a die before it was taken out of service so all of these cracks may not be present on all coins. Some cracks may be missing or shorter in an early state, but there should not be major new cracks that are unaccounted for. The die cracks on a coin are like fingerprints that may be used to uniquely attribute a VAM or JOH designator.

1921-D VAM-1A "Tru_t Filled Die" (Page 19)



1921-D VAM-1B1 "Capped R" (Page 20)



1921-D VAM-1B2 "Capped R, No e in We" (Page 23)



1921-D VAM-1D "Die Break in Denticles" (Page 24)



1921-D VAM-1E "Die Break Thru Star" (Page 26)



1921-D VAM-1F "Die Break M" (Page 27)



1921-D VAM-1G "Die Break Second S Of STATES" (Page 28)



1921-D VAM-1H "Spider Web Stars" (Page 29)



1921-D VAM-1i "Die Break N" (Page 30)



1921-D VAM-1J "Die Break A" (Page 31)



1921-D VAM-1K "Die Break 5th Left Star" (Page 33)



1921-D VAM-1L "Die Break AM" (Page 34)



1921-D VAM-1M "Horned O in OF & Break at Top of S" (Page 35)



1921-D VAM-1N "Unicorn D" (Page 37)



1921-D VAM-10 "Die Break A" (Page 39)



1921-D VAM-1P "Die Break E R" (Page 40)



1921-D VAM-1Q "Pompadour T - Die Break T Top" (Page 43)



1921-D VAM-1R "Die Break T Left" (Page 45)



1921-D VAM-1S "Die Gouge ED of UNITED" (Page 47)



1921-D VAM-1T "Die Break E Left" (Page 48)



1921-D VAM-1U "Die Gouge E & Wreath Bow" (Page 49)



1921-D VAM-1V "Die Break O" (Page 50)



1921-D VAM-1W "Die Break Between B-U" (Page 51)



1921-D VAM-1X "Cud at E-P" (Page 52)



1921-D VAM-1Z "No e in We" (Page 54)



1921-D VAM-1AA "Die Gouge E" (Page 56)



1921-D VAM-1AB "Pierced Tail Feathers" (Page 18)



1921-D VAM-1AC "Filled R of Trust (T_ust)" (Page 59)



1921-D VAM-1AD "Beanie S" (Page 60)



1921-D VAM-1AE "Die Break Inside Top of 2nd S" (Page 61)



1921-D VAM-1AF "Die Gouge D in Dollar" (Page 62)



1921-D VAM-1AG "Die Break 3rd Left Enlarged Star" (Page 63)



1921-D VAM-1AH "Die Break 1st S in STATES to Rim" (Page 65)



1921-D VAM-1AI "In God We rust #2" (Page 67)



1921-D VAM-1AJ "Die Scratch Between O-F" (Page 68)



1921-D VAM-1AK "Vertical Die Gouge E of ONE" (Page 69)



1921-D VAM-1AL "Die Gouge NE of ONE" (Page 70)



1921-D VAM-2B "Doubled Date, Die Break M" (Page 88)



1921-D VAM-3A "Die Break at Wing Tip, Dot Next To Wing" (Page 92)



1921-D VAM-5A (Formerly VAM-1Y) "Die Break ES" (Page 94)



1921-D VAM-7 "Doubled Ear, Left Stars & UNITED STATES - Die Chip Eagle's Right Wing" (Page 97)



1921-D VAM-8A (Formerly VAM-1C) "Flag R" (Page 98)



1921-D VAM-8B "Gouged Wreath" (Page 100)



1921-D VAM-9 "Doubled Date, Tripled Left Stars, - Die Break Serif Right, First S STATES" (Page 102)



1921-D VAM-9A "In God We rust – Filled Die" (Page 103)



1921-D VAM-11A "Missing We in Motto" (Page 104)



1921-D VAM-12A "Wreath Break" (Page 105)



1921-D JOH-2 "Stretched Star- 3rd Left Star" (Page Error! Bookmark not defined.)



1921-D JOH-3 "Die Break O of ONE" (Page 109)



1921-D VAM-1AR "Die Cracks Top Left of M Extending Left" (Page 76)



1921-D JOH-8 "Die Break 2 of 1921" (Page 111)



1921-D JOH-9 "Die Cracks Above A in STATES" (Page 112)



1921-D JOH-10 "Die Cracks Above A in STATES #2" (Page 71)



1921-D JOH-11 "Die Cracks Reverse ED of UNITED" (Page 113)



1921-D JOH-12 "In God We __ust" (Page 114)



1921-D JOH-13 "Die Cracks Above A in STATES, Liberty's Cap" (Page 115)



1921-D JOH-14 "Die Break Neck" (Page 116)



1921-D JOH-15 "Small Breaks 6th Right Star, D UNITED" (Page 118)



1921-D JOH-16 "Bean Bottom S" (Page 119)



1921-D JOH-17 "Weak God" (Page 120)



1921-D JOH-18 "Die Break 1 of Date" (Page 121)



VAM Hint:

Learn who the other variety collectors are and talk to them about their VAM experiences. Whether you are a novice or an expert, it is always fun to share your finds. Contacts can be made at local clubs, coin shows or across the internet. Many VAM collectors have begun communicating after bidding on the same coin selling on eBay. There are many ways to find people interested in dollar varieties.

Making friends with other collectors is a great way to trade your duplicates or purchase a coin you need. Often VAM collectors will have duplicate pieces available as they upgrade or make new finds. Informal communication within the VAM community is often the fastest way to learn about newly discovered varieties or which coins are truly rare.

Value Information

Variety	<i>F-12</i>	VF-25	XF-45	AU-50	AU-58	MS-60	MS-61	MS-62	MS-63	MS-64	MS-65
Common	9	9.50	10	12	25	30	35	40	48	100	260
VAM-1A	65	75	150	175	195	205	225	415	500		
VAM-1B1	15	20	28	40	45	50	75	90	140	300	475
VAM-1B2	75	100	140	190	225	250	350	400			
VAM-1D	15	18	25	35	42	49	57	65	80	150	310
VAM-1E	9	9.50	11	15	29	34	40	45	60	120	280
VAM-1F	15	17	23	28	39	43	52	60	75	140	300
VAM-1G	15	17	22	31	40	50	58	67	80	150	310
VAM-1G LDS	40	50	68	80	100	125	150	190	220	260	385
VAM-1H	15	17	23	33	38	46	52	60	75	140	300
VAM-1i	15	17	23	30	38	44	51	65	85	150	310
VAM-1J EDS	15	17	23	30	38	44	51	65	85	150	310
VAM-1J LDS	50	70	90	100	150	165	175	190	210	250	375
VAM-1K	15	18	25	30	40	45	55	65	80	150	310
VAM-1L	15	17	23	33	37	46	56	65	75	145	300
VAM-1M	15	17	22	31	35	45	55	65	75	145	300
VAM-1N	25	38	55	70	75	85	110	120	140	170	345
VAM-1N Cud	60	70	100	120	170	200	250	300			
VAM-10	40	50	68	80	100	125	150	190	220	260	385
VAM-1P	9	10	13	17	30	35	41	46	62	125	285
VAM-1Q	40	65	80	95	130	145	165	180	200	250	370
VAM-1R EDS	15	17	25	33	39	47	57	67	77	145	300
VAM-1R LDS	35	45	55	75	85	90	100	120	170	220	355
VAM-1S	15	18	25	30	40	45	55	65	80	150	310
VAM-1T	15	17	22	31	35	45	55	65	75	145	300
VAM-1U	17	21	28	35	42	49	62	75	90	175	340
VAM-1V	15	17	25	33	39	47	57	67	77	145	300
VAM-1W	15	18	25	30	40	45	55	65	80	150	310
VAM-1X	Ultra-	Rare									
VAM-1Z	30	40	55	65	85	100	130	165	180	230	350
VAM-1AA	15	18	25	30	40	45	55	65	80	150	310
VAM-1AB	15	17	22	31	35	45	55	65	75	145	300
VAM-1AC	30	40	50	65	85	95	120	150	170	220	350
VAM-1AD	15	18	25	30	40	45	55	65	80	150	310
VAM-1AE	15	17	22	31	35	45	55	65	75	145	300
VAM-1AF	15	18	25	30	40	45	55	65	80	150	310
VAM-1AG	15	18	25	28	35	40	50	60	70	125	290
VAM-1AH	15	17	22	31	35	45	55	65	75	145	300
VAM-1AI	30	40	50	65	85	95	120	150	170	220	350
VAM-1AJ	15	18	25	28	35	40	50	60	70	125	290
VAM-1AK	15	18	25	28	35	40	50	60	70	125	290
VAM-1AL	17	21	28	35	42	49	62	75	90	175	340
VAM-2A	15	17	22	31	35	45	55	65	75	145	300
VAM-2B	18	20	26	33	45	50	60	75	90	170	325
VAM-3A	40	65	80	95	130	145	165	180	200	250	360
VAM-5A	18	20	26	33	45	50	60	75	90	170	325
VAM-7	15	17	22	31	35	45	55	65	75	145	300
VAM-8A	35	45	55	75	85	90	100	120	170	220	335
VAM-8B	15	20	26	33	45	50	60	75	90	170	325
VAM-9	15	17	22	31	35	45	55	65	75	145	300
VAM-9A	30	40	50	65	85	95	120	150	170	220	350
VAM-11A	40	50	65	75	95	120	150	175	200	240	350
VAM-12A	15	17	22	31	37	48	55	65	75	145	300

Variety	F-12	VF-25	XF-45	AU-50	AU-58	MS-60	MS-61	MS-62	MS-63	MS-64	MS-65
Common	9	9.50	10	12	25	30	35	40	48	100	260
JOH-2	15	17	22	31	35	45	55	65	75	145	300
JOH-3	12	15	20	25	30	35	40	45	52	110	275
VAM-1AR	12	15	20	25	30	35	40	45	52	110	275
JOH-8	15	17	22	31	35	45	55	65	75	145	300
JOH-9	12	15	20	25	30	35	40	45	52	110	275
JOH-10	12	15	20	25	30	35	40	45	52	110	275
JOH-11	12	15	20	25	30	35	40	45	52	110	275
JOH-12	50	70	90	100	150	165	175	190	210	250	375
JOH-13	12	15	20	25	30	35	40	45	52	110	275
JOH-14	15	18	25	30	40	45	55	65	80	150	310
JOH-15	15	17	22	31	35	45	55	65	75	145	300
JOH-16	15	17	22	31	35	45	55	65	75	145	300
JOH-17	30	40	50	65	85	95	120	150	170	220	350
JOH-18	15	17	22	31	35	45	55	65	75	145	300

New Finds

If you look closely at the dates that each 1921-D variety was discovered, you will see that new attributions took place from 1968 to the present, with many of the discoveries found in the last four years. It almost certain that there are new varieties yet to be discovered. If you believe you have a unique 1921-D coin with more than just simple die cracks, please send an email to rob@rjrc.com or write to

Acknowledgements

Several people were invaluable in the creation of this book. Jim Hart had an eagle eye for discovering coins with new die breaks. He was also a faithful correspondent offering advice, encouragement and feedback and sharing generously of his finds. This book would not have come about without his assistance. Leroy Van Allen was also extremely helpful in evaluating new discoveries and supplying feedback on the coins as well as this manuscript. His pioneering work in VAMs set the standard for all Morgan die variety research. Dr. Michael Fey provided support, advice, editing and coins for research and photography. Mr. David Wang offered lessons learned from his publication of research on 1879-S reverse of 1878 silver dollars. Tom Mulvaney was generous in assisting with the cover photo and the pictures used for the line drawing illustrations. Several coin dealers including Henry Weiner and Golden Eagle Coin were very supportive of search efforts for varieties in their 1921-D inventories. Gene Henry of Gene Henry coins also offered thousands of coins for examination and research. Jeff Oxman, Paul Pierce, John Baumgart and William Scholl helped by loaning coins for study and discovering new JOH varieties. Herb Zepke and Logan McKechnie also provided valuable information about their 1921-D finds. Tim Ervin provided important help with Photoshop. And not to be forgotten, my wife Jennifer was an excellent editor and extremely tolerant of my long hours spent looking at coins through a microscope and preparing research on the computer!

Ralph Greco (Texvam) Gene Gress (Mindsway Electronics) Dennis Halladay herb matheis Rick LaValley Jerry Robertson John Kohut