CATALOG M

Aug 6 1982 - from John Williams

For Oscar

METEORITES and Tektites from SCIENCE GRAPHICS

Ft Worth Museum of Science + History

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A WORD ABOUT OUR METEORITES

With the exception of a few hundred pounds of moon rocks, meteorites are still the only extraterrestrial materials we can examine first hand. In recent years meteorites have been diligently sought by researchers and private collectors in ever increasing numbers. Today, it is a resource that is rapidly becoming depleted. They are snatched up as soon as they are observed to fall to earth, and the well known meteorite locations such as Meteor Crater, Arizona and Odessa, Texas are nearly exhausted of their once plentiful supply. The result is that meteorites are becoming increasingly rare and are considerably more valuable monetarily than silver.

Science Graphics has acquired a limited supply of meteorites from several well known falls. Some of these are listed in this catalog. The prices of individual specimens are usually established by gram weight. All of our specimens have been cleaned of any rust and soil so that the fusion crust is nicely displayed. Sliced, polished and etched specimens are priced higher per gram weight than individuals. Also especially fine specimens are indicated under "special comments". We can supply Odessa meteorites from 100 grams to about 5000 grams on a wholesale quantity basis. Your inquiries are invited.

Since supplies vary almost daily and all specimens are unique and one of a kind we cannot guarentee that the specimens you request are still available. We can often make equitable substitutions and we will do so unless you request otherwise. All specimens are sold on a money back guarentee that they are the genuine meteorites described in this catalog.

SCIENCE GRAPHICS

Legend of abbreviations

I = Individual
E = Etched slab
TN = Tumble polished nuggets
EH = Etched half
BI = Broken individual
ES = End slice

CANYON DIABLO, Coconino Co., Arizona. Found 1891
Type: Nickel iron, coarse octahedrite

These meteorites were found in the vicinity of the Barringer Meteorite Crater located 40 miles east of Flagstaff, Arizona. The crater, about 4000 feet in diameter, was formed about 20,000 years ago by the impact of several large nickel iron meteorites, the remnants of which were scattered around the crater. This was a favorite collecting site for many years but today all collecting is prohibited and the supply is all but exhausted. The meteorites are 92% iron, 7% nickel and trace amounts of accessory minerals. Sliced and etched specimens show Widmanstatten figures along with graphite and troilite nodules and schreibersite inclusions among the kamacite and taenite plates. Small diamonds have also been found in some specimens.

Catalog #	Approximate Dimensions (mm)	Weight (gram)	Special Comments	Price
CD1-11I	40 x 15 x 10	11.0	Individual	$ 7.00
CD2-19I	35 x 18 x 8	19.2	Individual	12.50
CD3-22I	47 x 18 x 8	22.1	Individual	14.25
CD4-36I	54 x 20 x 12	36.6	Typical elongate	23.75
CD5-63I	50 x 22 x 30	63.0	Beautiful shape	40.75
CD6-90I	50 x 30 x 30	90.6	Individual	58.75
CD7-86I	50 x 32 x 20	86.4	One end massive	56.00
CD8-82I	60 x 38 x 6	82.4	Flat, nice shape	53.50
CD9-90I	65 x 30 x 10	90.8	Unusual dumbbell	59.00
CD10-136I	65 x 20 x 45	136.5	Individual	88.75
CD11-132I	55 x 60 x 25	132.2	Interesting triangular shape	85.93
CD12-198I	72 x 62 x 20	198.6	Typical flat shape	129.00
CD13-261I	70 x 48 x 27	261.0	Crater rim specimen	169.50
CD14-354I	118 x 45 x 25	354.2	Beautiful shape	236.75
CD15-457I	65 x 45 x 35	457.1	Beautiful shape, massive	297.00
CD16-1535I	120 x 90 x 45	1535.2	Elegant display specimen,many 'thumb prints' and points. One of our finest.	995.00
CD17-1655I	125 x 75 x 45	1655.1	Display specimen	1,075.00
CD18-360CP	68 x 72 x 35	360.9	Rim specimen, cut and polished	234.50

ODESSA, Ector Co., Texas. Found 1922
Type: Nickel iron, coarse octahedrite

About 50,000 years ago, tons of meteoritic material fell in west Texas, creating a crater 550 feet in diameter and several smaller adjacent craters. The site is 7 miles west of Odessa, Texas, in the middle of a forest of oil wells. More than 10 tons of meteoritic material has been located. Odessa meteorites are similar to Canyon Diablo specimens. Externally they are more weathered and internally their Widmanstatten patterns are less uniform. Like Canyon Diablo irons, Odessa irons have 92% iron, 7% nickel and many accessory minerals. Odessa meteorites are still being located today with sensitive metal detectors although the discovery of large specimens is becoming increasingly rare. Museums, planetariums, and private collectors who wish larger specimens up to approximately 20 lbs. should contact us for availability.

Catalog #	Approximate Dimensions (mm)	Weight (gram)	Special Comments	Price
01-21I	30 x 20 x 13	21.5	Small but nicely shaped	$ 11.75
02-29I	30 x 20 x 14	29.1	Individual	16.00
03-62I	40 x 25 x 25	62.8	Nice shape	34.50
04-87I	45 x 35 x 25	87.7	Flat side,good for etching	48.25
05-108I	48 x 33 x 28	108.0	Good shape, nice cavities	59.50
06-121I	55 x 35 x 20	121.2	Elongate,good flat side for etching	66.50
07-131I	52 x 32 x 26	131.2	Kamacite plates visible	72.00
08-147I	55 x 48 x 20	147.4	Individual	81.00
09-158I	63 x 40 x 26	158.1	Beautiful shape,cavities	87.00
010-167I	58 x 40 x 27	167.1	Nice shape	92.00
011-187I	50 x 50 x 25	187.8	Excellent shape, irregular	103.00
012-364I	72 x 45 x 40	364.3	Massive shape	200.00
013-438I	80 x 55 x 35	438.5	Unusually fine shape,many points and cavities	240.00
014-450I	70 x 55 x 40	450.7	Massive shape	248.00
015-496I	75 x 45 x 50	496.9	Massive, good shape	273.00
016-710I	85 x 72 x 35	710.0	Individual, nice shape	390.50
017-3052I	155 x 100 x 60	3052.0	Museum display specimen	1,650.00

ODESSA NUGGETS

When nickel iron meteorites have been cleaned of terrestrial rust, they always appear black on the outside. This dark surface is an oxide fusion crust of magnetite produced during its fiery passage through the atmosphere. The true, cosmic nickel iron metal is revealed only if this fusion crust is removed or the specimen is cut. The specimens listed below have been carefully tumble polished for more than 100 hours to remove the oxidized fusion crust, resulting in beautiful meteorite nuggets with the silvery nickel iron showing on the exterior. These nuggets are very unusual and extremely attractive display specimens. In most specimens, the Widmanstatten crystals can be traced. We have only a limited quantity of these specimens.

Odessa nuggets

Catalog #	Approximate Dimensions (mm)	Weight (gram)	Special Comments	Price
018-10TN	14 x 12 x 10	10.4		$ 8.00
019-13TN	20 x 17 x 10	13.4		10.00
020-18TN	26 x 12 x 11	18.5		14.00
021-24TN	24 x 13 x 13	24.8		18.50
022-40TN	24 x 23 x 24	40.8	Unusual shape, nearly cubic	30.50
023-52TN	40 x 20 x 14	52.1		39.00
024-62TN	28 x 28 x 20	62.5		46.50
025-85TN	40 x 35 x 20	85.8		64.00
026-106TN	25 x 35 x 20	106.0	Deep cavities	79.50
027-122TN	40 x 25 x 32	122.2		91.50
028-129TN	45 x 35 x 16	129.2	Deep cavities	97.00

ODESSA HALF SLICES

These Odessa specimens have been cut in half, polished and etched to reveal the Widmanstatten figures, a true cosmic crystalline structure not found in terrestrial rocks or minerals. Nickel iron meteorites are very hard and require a diamond saw cutting about an inch per hour to cut through each specimen. This operation along with polishing and etching naturally increases the value of the specimens. The dimensions give the approximate length and width of the etched face.

Catalog #	Approximate Dimensions (mm)	Weight (gram)	Special Comments	Price
029-46EH	29 x 25	46		$ 34.50
030-56EH	40 x 23	56		39.50
031-75EH	50 x 27	75		50.00
032-75EH9	34 x 29	75	Graphite & schreibersite inclusions	47.50
033-91EH	52 x 37	91	Graphite & schreibersite inclusions	64.00
034-107EH	47 x 47	108	Roughly round face	71.00
035-131EH	37 x 37	131	Roughly square face	85.00
036-146EH	58 x 29	146		95.00

TOLUCA (XIQIUPILCO), Mexico.
Type: Nickel iron, medium octahedrite

Presently we are slabbing a large Toluca meteorite. These slabs will be polished and etched. Presently we have two Toluca slabs that have been polished and etched, and both are beautiful display specimens.

Catalog #	Approximate Dimensions (mm)	Weight (gram)	Special Comments	Price
T1-302E	100 x 80 x 5	302.2	Beautiful shape, large surface	$ 300.00
T2-202E	85 x 55 x 7	202.5		$ 200.00

NUEVO MERCURIO, Jalisco, Mexico. Fell 1978
Type: Stone; Olivine hypersthene chondrite

Hundreds of small stone meteorites fell near the town of Nuevo Mercurio on December 18, 1978. The total recovered weight was less than 10 kilograms. Most of the meteorites are remarkably uniform in weight and size ranging from 2 to 7 grams. We do have a few rare specimens of larger size which we include in the list below. Prices vary depending upon their weight and their completeness. Complete individuals with only minor breaks are priced higher than broken individuals. Yet, the broken individuals allow an opportunity to study the interiors. All the specimens exhibit a black fusion crust. Our supply of these beautiful stones is quite limited and we do not anticipate any further opportunity to acquire another supply.

Catalog #	Approximate Dimensions (mm)	Weight (gram)	Special Comments	Price
NM1-70I	45 x 40 x 15	70.8	Largest specimen	$ 350.00
NM2-43BI	irregular	43.5	Fine display specimen	215.00
NM3-3.4BI	18 x 18 x 10	3.4	Broken in flight	13.50
NM4-5.3I	15 x 12 x 10	5.3	Individual	26.50
NM5-5.0I	12 x 12 x 15	5.0	Individual	25.00
NM6-5.1BI	15 x 12 x 13	5.1	Broken individual	20.00
NM7-5.0I	18 x 15 x 12	5.0	Individual	25.00
NM8-1.9BI	12 x 12 x 8	1.9	Broken individual	7.50
NM9-6.5I	22 x 17 x 12	6.5	Individual	32.50
NM10-5.9BI	20 x 17 x 10	5.9	Broken in flight	23.50
NM11-3.7BI	20 x 12 x 11	3.7	Broken in flight	14.50
NM12-7.0BI	21 x 15 x 13	7.0	Broken individual	28.00
NM13-6.5I	20 x 16 x 15	6.5	Individual	32.50
NM14-2.5I	13 x 13 x 10	2.5	Individual	12.50
NM15-6.3I	19 x 18 x 12	6.3	Individual	31.50
NM16-3.4I	15 x 13 x 12	3.4	Individual	17.00
NM17-6.1BI	23 x 17 x 10	6.1	Almost all interior, small area of fusion crust	24.50
NM18-3.8BI	19 x 12 x 12	3.8	Small broken end	15.00
NM19-3.3I	20 x 12 x 9	3.3	Individual	16.50
NM20-4.3I	17 x 15 x 12	4.3	Individual	21.50
NM21-6.6BI	18 x 18 x 13	6.6	Nice interior; chondrules	26.50
NM22-6.0BI	20 x 15 x 13	6.0	Very nice; small broken area	24.00
NM23-3.1I	16 x 14 x 7	3.1	Individual	15.50
NM24-3.9I	17 x 14 x 7	3.9	Individual	19.50
NM25-6.7BI	21 x 17 x 12	6.7	Broken individual	26.50
NM26-3.7I	18 x 14 x 8	3.7	Individual	18.50
NM27-2.3I	15 x 13 x 10	2.3	Individual	11.50
NM28-5.9I	18 x 15 x 11	5.9	Individual	29.50
NM29-6.7I	22 x 17 x 12	6.7	Individual	33.50
NM30-6.8BI	20 x 18 x 15	6.8	Broken individual	27.00
NM31-2.0I	15 x 11 x 8	2.0	Individual	10.00

PLAINVIEW, Hale Co., Texas. Fall 1917
Type: Stone; Olivine bronzite chondrite

These well known stone meteorites are specimens from one of the largest showers of stony meteorites to occur in the United States. Plainview specimens are very rare today. We offer a few slabs from this fall. They have been polished to show the spherical chondrules and bright nickel iron flakes. These specimens are especially beautiful.

Catalog #	Approximate Dimensions (mm)	Weight (gram)	Special Comments	Price
P1-29S	60 x 28 x 4	29.5	Slice	$ 147.50
P2-31S	65 x 33 x 4	31.1	Slice	155.50
P3-32S	60 x 37 x 5	32.1	Slice	160.50
P4-27S	65 x 28 x 6	27.1	Slice	130.50
P5-27S	57 x 25 x 5	27.0	Slice	135.50
P6-20S	54 x 22 x 10	20.7	End piece	103.50

PUEBLITO DE ALLENDE, Chihuahua, Mexico. Fall: February 8, 1969
Type: Carbonaceous chondrite (type 3)

Until the fall of these meteorites in the winter of 1969, less than 30 pounds of carbonaceous chondrite meteorites were known. Of the several hundred pounds recovered nearly all of the material found its way to the Smithsonian Institution. These very fine individuals and slabs are in limited supply and we cannot guarentee any future supply. We suggest that you act quickly to avoid disappointment. We will make substitutions whenever possible if the specimen you select is no longer available. The price of individual specimens is based upon weight and the percentage of fusion crust on the surface. More complete specimens are higher priced.

Catalog #	Approximate Dimension (mm)	Weight (gram)	Special Comments	Price
PA01-19BI	34 x 24 x 19	19.2	40% fusion crust	$ 47.00
PA02-26BI	34 x 34 x 30	26.8	50% fusion crust	65.00
PA03-28BI	32 x 23 x 25	28.1	80% fusion crust	84.00
PA04-35BI	43 x 28 x 18	35.0	75% fusion crust	105.00
PA05-41BI	45 x 26 x 22	41.5	90% fusion crust	123.00
PA06-73BI	44 x 44 x 33	73.5	85% fusion crust	219.00
PA07-93BI	50 x 36 x 26	93.0	30% fusion crust	232.00
PA08-177BI	71 x 65 x 30	177.3	45% fusion crust	442.00
PA09-H18BI	20 x 20 x 30	18.7	80% fusion crust	54.00
PA10-H27BI	38 x 32 x 20	27.5	35% fusion crust	67.00
PA11-H28BI	34 x 34 x 23	28.4	35% fusion crust	70.00
PA12-H37BI	39 x 33 x 25	37.1	55% fusion crust	92.00
PA13-H41BI	45 x 41 x 22	41.6	40% fusion crust	102.00
PA14-H59BI	51 x 45 x 23	59.2	65% fusion crust	177.00
PA15-H73BI	44 x 42 x 37	73.7	40% fusion crust	182.00
PA16-H108BI	64 x 68 x 20	108.5	95% fusion crust	270.00

PUEBLITO DE ALLENDE SLABS

Catalog #	Approximate Dimensions (mm)	Weight (gram)	Special Comments	Price
PA17-18ES	66 x 31 x 18	18	End piece slab	$ 63.00
PA18-48S	74 x 57 x 6	48	Slice	240.00
PA19-53ES	95 x 60 x 14	53	End piece slice	185.00
PA20-54S	75 x 70 x 6	54	Slice	270.00
PA21-59S	74 x 63 x 6	59	Slice	295.00
PA22-H22S	57 x 40 x 6	22	Slice	110.00
PA23-H20ES	73 x 65 x 8	20	End piece slice	60.00
PA24-H49S	75 x 65 x 6	49	Slice	245.00
PA25-H58S	78 x 68 x 7	58	Slice	290.00
PA26-H61S	69 x 60 x 7	61	Slice	305.00
PA27-H81ES	87 x 77 x 13	81	End piece slice	283.00
PA28-H100S	95 x 60 x 14	100.5	Slice	500.00

INDOCHINITE TEKTITES, Pailin District, Thailand

The origin of tektites has been argued by scientists for decades. Although there is some speculation that tektites may be crustal material blasted off the moon by crater-producing meteorites striking the moon, most scientists today believe that they are pieces of earth crust that were blasted off the surface by impacting meteorites or by volcanic explosions. The tektites re-entered the atmosphere and partially melted producing flow lines during their flight back to earth. Tektites are similar to volcanic glass (obsidian) and are covered with solution pits and flow marks. Typical shapes are spheres, teardrops and dumbbells. Although indochinite tektites are fairly common, we have selected excellent museum quality specimens of large size and near perfect shape.

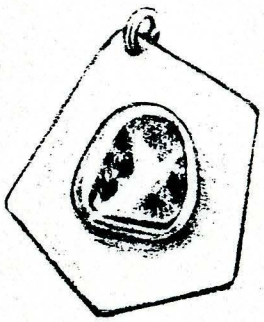
Catalog #	Approximate Dimensions (mm)	Weight (gram)	Special Comments	Price
IT502-10.5	40 x 15 x 12	10.5	Select individual	$ 5.00
IT502-6.0	25 x 15 x 15	6.0	Select individual	5.00
IT502-5.0	30 x 15 x 15	5.0	Unusual perfect teardrop	5.00
IT502-10.0	40 x 18 x 15	10.0	Nice teardrop, flow lines	5.00
IT502-11B	39 x 20 x 12	11.0	Teardrop, very smooth	5.00
IT502-9.5	46 x 18 x 16	9.5	Teardrop	5.00
IT652-17.0	45 x 20 x 20	17.0	Teardrop	10.00
IT652-20.5	42 x 24 x 24	20.5	Teardrop	10.00
IT782-36.6	60 x 30 x 18	36.6	Teardrop, flow lines	17.00
IT772-15.7	70 x 20 x 18	15.7	Unusually long teardrop	15.00
IT832-41.0	70 x 28 x 25	41.0	Beautiful teardrop	20.00
IT832-35.5	57 x 28 x 25	33.5	Beautiful teardrop	20.00
IT952-86.0	90 x 38 x 25	86.0	Teardrop,museum quality	45.00
IT832-81.1	52 x 24	81.8	Large oval	20.00
IT832-58.5	36mm dia.	58.5	Spheroid	20.00
IT652-19.1	19mm dia.	19.1	Spheroid	10.00
IT832-83.2	63 x 34 x 20	83.2	Dumbbell,nuseum quality	20.00
IT772-27.8	59 x 15 x 15	27.8	Dumbbell, very nice shape	15.00

IT652-10.9	50 x 8 x 10	10.9	Small dumbbell	10.00
IT832-62.7	80 x 28 x 15	62.7	Large elongate, museum quality	20.00
IT952-111.0	82 x 45 x 17	111.0	Large elongate, museum quality	45.00

Also we have selected teardrops, clubs, elongates and dumbbells not so perfectly shaped as the ones listed above but still very nice for $1.00 and $2.00 each.

ODESSA METEORITE PENDANTS

Odessa meteorites are well shaped for working into beautiful stones for unusual jewelry. We thought we might try our hand at it. We made a silver irregular polygonal shaped plate and mounted an irregular shaped Odessa meteorite on it with a surrounding bezel. The meteorite shows its silvery nickel iron but enough of the fusion crust remains to contrast the specimen with the silver setting. We really like it, so we selected some of our best smaller nuggets for this purpose. We found an excellent silversmith (Arizona has the best) to fashion the pendants for us. Each one is different since, of course, each meteorite looks different. We think our price is good at $55.00 each. Certainly it's an unusual and attractive gift for the astronomically minded!

actual size 

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ORDERING AND SHIPPING INFORMATION

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FOREIGN ORDERS: Purchase orders are accepted from foreign institutions. Payment must be made through a letter of credit drawn on a bank of the United States of America only. Tariff and customs forms must accompany purchase order when applicable.

Please add 3% of the total order to cover shipping and handling. We will ship best way. Small packages are generally sent air parcel post, larger packages by surface mail.