

Determined by Dr. David L. Meyer, Univ. Cincinnati

Specimen ID: USNM E20025 "-1"		AC's Specimen ID: AC 6a Dried	
Species: <i>D. discoidea</i> David aster		Date Examined: 10.30.03	
Was sample photographed before analysis?		Yes	After analysis? No
Area	Variable	Value	Notes
Centrodorsal	Centrodorsal Diameter	5.5	
	Centrodorsal Polar Diameter	4.9	
	Centrodorsal Height	0.8	
	Centrodorsal Shape	2	discoidal
	# Cirral Sockets	25	
	Cirral Socket Arrangement	4	one row
	Cirral Socket Shape	1	circular
Cirrals	Cirr. 1	# Cirral Segments	12
		# Segments Ornamented	2
		Cirral Length	9.3
		3rd Cirral Segment Length	1.2
		Antepenultimate Segment Length	0.5
		Cirral Ornamentation Type?	1 slight carinae
	Cirr. 2	# Cirral Segments	13
		# Segments Ornamented	2
		Cirral Length	10.5
	Cirr. 3	# Cirral Segments	13
		# Segments Ornamented	2
		Cirral Length	9.8
Rays / Arms	I Br A, # Primibrachials on A Ray		2
	II Br A, # Secundibrachials on A Ray		4
	III Br A, # Tertibrachials on A Ray		3
	1st Triangular Brachial on A4		7
	Brachials Spinose?		1 yes
	Arm Width at 1st Syzygy on A4		1.4
	1st Syzygy Position on A4		2(3)
	2nd Syzygy Position on A4		8(9)
	3rd Syzygy Position on A4		13(14)
	4th Syzygy Position on A4		18(19)
	5th Syzygy Position on A4		23(24)
	6th Syzygy Position on A4		28(29)
	# Arms A		5
	# Arms B		4
	# Arms C		3
	# Arms D		4
	# Arms E		4
	Arm Length A4		85 broken near tip
	Arm Length B4		28 broken near base
	Arm Length C4		12.8
	Arm Length D4		136
	Arm Length E4		75

Pinnules	PD	PD Comb Teeth Double or Single?	2	double
		PD Tube Feet Present?	1	present
		PD # Segments	38	
		PD # Comb Teeth	8	
		PD Leng A1	14.0	
	PP	PP Comb Teeth Double or Single?	2	double
		PP Tube Feet Present?	1	present
		PP # Segments	>13	broken on both ends
		PP # Comb Teeth	unk.	none observed, broken
		PP Leng A1	>5.0	broken on both ends
	P1	P1 Comb Teeth Double or Single?	2	double
		P1 Tube Feet Present?	0	absent
		P1 # Segments	30	
		P1 # Comb Teeth	10	
		P1 Leng A1	9.5	
	P2	P2 Comb Teeth Double or Single?	2	double
		P2 Tube Feet Present?	1	present
		P2 # Segments	37	
		P2 # Comb Teeth	11	
		P2 Leng A1	13.3	
		# Pinnules w/ Comb Teeth After 2nd Oral Pinn. on A1	0	unsure
	Distal	Distal Pinnule # Segments	19	
		Distal Pinnule Spinose?	1	yes
		Distal Pinnule Leng A1	9.5	
		Distal Pinnule Arrangement	1	radial posture
		Sex?	unk.	
		# Regenerated Arms	0	

Overall sample quality?

Very hard to examine -- arms were tightly folded.

Sample coloration?

Able to orient sample to A ray?

No -- had to assign an A ray.

Any notes on pinnules, etc.:

Very, very difficult to measure pinnules.

Specimen ID: USNM E20025 "-2"		AC's Specimen ID: AC 6b Dried	
Species: <i>D. discoidea</i>		Date Examined: 10.31 & 11.03.03	
Was sample photographed before analysis?		Yes	After analysis? No
Area	Variable	Value	Notes
Centrodorsal	Centrodorsal Diameter	4.2	
	Centrodorsal Polar Diameter	3.3	
	Centrodorsal Height	0.7	
	Centrodorsal Shape	2	discoidal
	# Cirral Sockets	20	
	Cirral Socket Arrangement	4	one row
	Cirral Socket Shape	1	circular
Cirrals	Cirr. 1	# Cirral Segments	12
		# Segments Ornamented	2
		Cirral Length	7.0
		3rd Cirral Segment Length	0.8
		Antepenultimate Segment Length	0.5
		Cirral Ornamentation Type?	2 single spines
	Cirr. 2	# Cirral Segments	12
		# Segments Ornamented	2
		Cirral Length	8.9
	Cirr. 3	# Cirral Segments	12
		# Segments Ornamented	2
		Cirral Length	8.1
Rays / Arms	I Br A, # Primibrachials on A Ray		2
	II Br A, # Secundibrachials on A Ray		4
	III Br A, # Tertibrachials on A Ray		0
	1st Triangular Brachial on A4		7
	Brachials Spinose?		1 yes
	Arm Width at 1st Syzygy on A4		1.4
	1st Syzygy Position on A4	A3	2(3)
	2nd Syzygy Position on A4	A3	9(10)
	3rd Syzygy Position on A4	A3	14(15)
	4th Syzygy Position on A4	A3	19(20)
	5th Syzygy Position on A4	A3	24(25)
	6th Syzygy Position on A4	A3	29(30)
	# Arms A		4
	# Arms B		4
	# Arms C		4
	# Arms D		4
	# Arms E		4
	Arm Length A4		65 broken
	Arm Length B4		74 broken
	Arm Length C4		90 broken
	Arm Length D4		120 possibly unbroken
	Arm Length E4		95 possibly unbroken

Pinnules	PD	PD Comb Teeth Double or Single?	2	double
		PD Tube Feet Present?	1	present
		PD # Segments	44	
		PD # Comb Teeth	11	
		PD Leng A1	16.0	
	PP	PP Comb Teeth Double or Single?	2	double
		PP Tube Feet Present?	1	present
		PP # Segments	37	
		PP # Comb Teeth	10	
		PP Leng A1	11.0	
	P1	P1 Comb Teeth Double or Single?	2	double
		P1 Tube Feet Present?	0	absent
		P1 # Segments	28	
		P1 # Comb Teeth	9	
		P1 Leng A1	9.0	
	P2	P2 Comb Teeth Double or Single?	2	double
		P2 Tube Feet Present?	0	absent
		P2 # Segments	21	
		P2 # Comb Teeth	9	
		P2 Leng A1	5.5	
		# Pinnules w/ Comb Teeth After 2nd Oral Pinn. on A1	2	
	Distal	Distal Pinnule # Segments	19	
		Distal Pinnule Spinose?	1	yes
		Distal Pinnule Leng A1	9.0	
		Distal Pinnule Arrangement	1	radial posture
		Sex?	unk.	
		# Regenerated Arms	0	

Overall sample quality?

Difficult to measure arm lengths due to arm tips curled and entwined

Sample coloration?

Pale, dusty tan with darker pinnules

Able to orient sample to A ray?

Yes

Any notes on pinnules, etc.:

Oral pinnule measurements okay

Slight keel developed on P1 & P2 -- less developed than on *D. rubiginosa*

Specimen ID: USNM E20025 "-3"		AC's Specimen ID: AC 6c Dried	
Species: <i>D. discoidea</i>		Date Examined: 11.02.03	
Was sample photographed before analysis?		Yes	After analysis? No
Area	Variable	Value	Notes
Centrodorsal	Centrodorsal Diameter	4.1	
	Centrodorsal Polar Diameter	3.8	
	Centrodorsal Height	0.5	
	Centrodorsal Shape	2	discoidal
	# Cirral Sockets	17	
	Cirral Socket Arrangement	4	one row
	Cirral Socket Shape	1	circular
Cirrals	Cirr. 1	# Cirral Segments	12
		# Segments Ornamented	2
		Cirral Length	8.3
		3rd Cirral Segment Length	1.0
		Antepenultimate Segment Length	0.4
		Cirral Ornamentation Type?	1 slight carinae
	Cirr. 2	# Cirral Segments	12
		# Segments Ornamented	2
		Cirral Length	7.6
	Cirr. 3	# Cirral Segments	12
		# Segments Ornamented	3
		Cirral Length	7.2
Rays / Arms	I Br A, # Primibrachials on A Ray		2
	II Br A, # Secundibrachials on A Ray		4
	III Br A, # Tertibrachials on A Ray		3
	1st Triangular Brachial on A4		7
	Brachials Spinose?		1 yes
	Arm Width at 1st Syzygy on A4		1.2
	1st Syzygy Position on A4		3(4)
	2nd Syzygy Position on A4		8(9)
	3rd Syzygy Position on A4		13(14)
	4th Syzygy Position on A4		18(19)
	5th Syzygy Position on A4		23(24)
	6th Syzygy Position on A4		28(29)
	# Arms A		5
	# Arms B		4
	# Arms C		3
	# Arms D		4
	# Arms E		4
	Arm Length A4		38 all arms broken
	Arm Length B4		45 regenerated
	Arm Length C4	C1	45 regenerated
	Arm Length D4		25 regenerated
	Arm Length E4		28 regenerated

Pinnules	PD	PD Comb Teeth Double or Single?	2	double
		PD Tube Feet Present?	0	absent
		PD # Segments	35	
		PD # Comb Teeth	9	
		PD Leng A1 C1	10.6	
	PP	PP Comb Teeth Double or Single?	2	double
		PP Tube Feet Present?	0	absent
		PP # Segments	34	
		PP # Comb Teeth	10	
		PP Leng A1 C1	9.7	
	P1	P1 Comb Teeth Double or Single?	2	double
		P1 Tube Feet Present?	0	absent
		P1 # Segments	18	
		P1 # Comb Teeth	8	
		P1 Leng A1 C1	5.4	
	P2	P2 Comb Teeth Double or Single?	2	double
		P2 Tube Feet Present?	0	absent
		P2 # Segments	21	
		P2 # Comb Teeth	8	
		P2 Leng A1 C1	5.0	
	Distal	# Pinnules w/ Comb Teeth After 2nd Oral Pinn. on A1	2	
		Distal Pinnule # Segments	17	
		Distal Pinnule Spinose?	1	yes
		Distal Pinnule Leng A1	7.4	
		Distal Pinnule Arrangement	1	radial posture
	Sex?	unk.		
	# Regenerated Arms	11		

Overall sample quality?

Badly broken arms, but very easy to measure due to "crisp" preservation of delicate pinnules, etc.

Sample coloration?

Pale dun-colored, pinnules same color as arm

Able to orient sample to A ray?

Yes

Any notes on pinnules, etc.:

Much more delicate and gracile form than the other two individuals in this group.