

WORLD'S SHORTEST CATALOGUE: PICKARD'S LITTLE DIPPER

This article is about the world's smallest Catalogue: mine with only one entry. Why a Catalogue? Read to the end.

Background: Last January after browsing Lyra and Cygnus, I started sweeping south from Albireo towards Vulpecula with my 25x100 binoculars. Suddenly I stumbled across a beautiful asterism: a straight line of 6 stars with 4 more in the shape of a hook. I knew I was onto something big: **MAYBE I HAD DISCOVERED SOMETHING!** After looking in the star charts, what I had seen was the Coathanger asterism, also called Brocchi's Cluster and Collinder 399. It was first sighted by the Persian astronomer Al Sufi in 964 A.D. It had been considered a star cluster for most of the 20th century until data from the Hipparcos satellite showed that the stars did not have the same proper motion. Thus, it is no more than a chance alignment of stars. But even though I had not discovered it, I will never forget the "wow" factor of stumbling onto it.

The line of 6 stars is composed of Mag 6.3~7.1 stars. Five are blue type A0~B5 and the 6th is a yellow type K3. The "Hook" is composed of 4 stars Mag 5.1~7.1 with 2 blue of spectral type A, and 2 yellow types K and M. Here is a Stellarium screen shot. North is on the upper right and the hook is "upside-down".



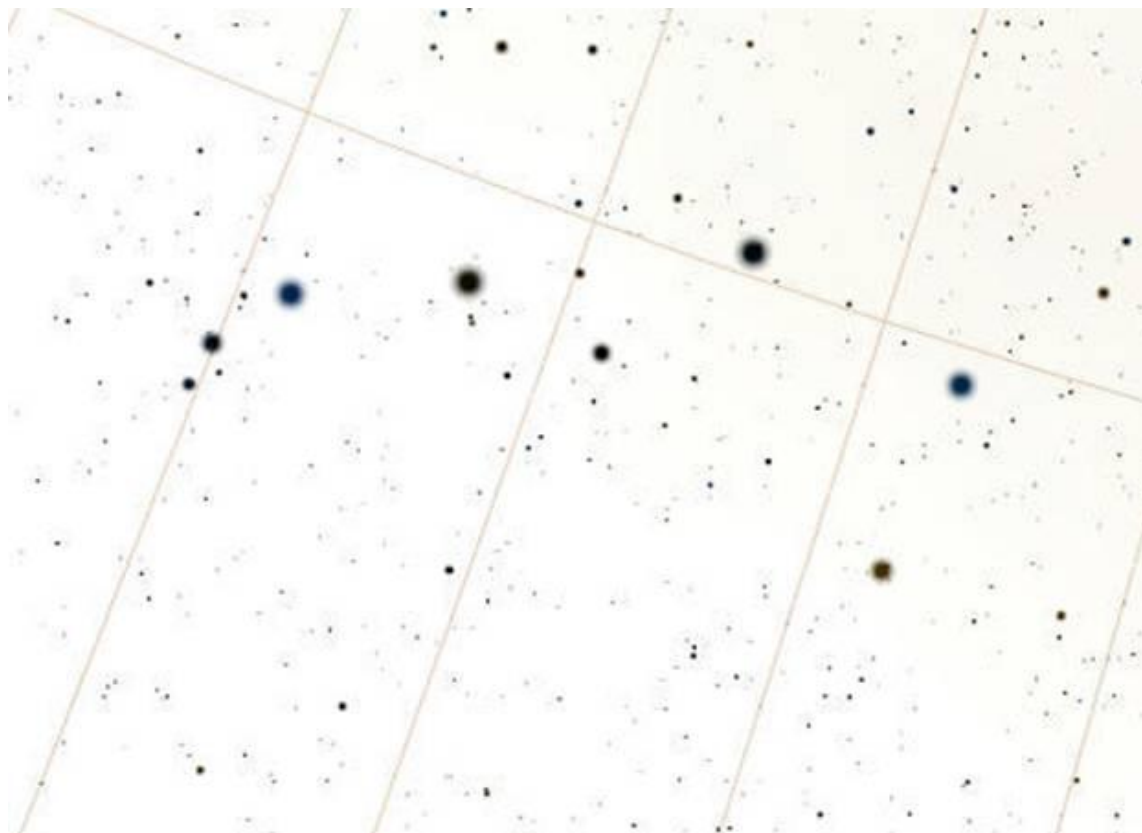
Chaple's Arc/The Fairy Ring: In 1980, Glenn Chaple wrote about an amazing little asterism called "Chaple's Arc". In looking for the double star h1470 in Cygnus, he found four doubles arranged in an arc in a tight field of view. The article appeared in the September issue of *Deep Sky Monthly*. 25 years later he discovered another amateur astronomer had written about the same asterism in the British *Sky at Night* and renamed it the "Fairy Ring". Can you just imagine Chapel's disappointment when someone else stole his thunder? Glenn's *Skyscrapers* post is here:

<http://www.theskyscrapers.org/chaples-arc>

“Wow” Again: In January I was sweeping southwest from Caph (β Cassopiae). I stumbled across another great asterism: it is another “Little Dipper” one quarter the size of the Little Dipper in Ursa Minor. It is about 12° SW of Caph in the corner of Cassiopia, Andromeda and Lacerta. In fact the 2 western-most stars are in Lacerta. It is really quite lovely. Here is a Stellarium screen shot. North is in the upper right and the dipper is “upside-down”.



There are 4 stars in the reverse-bent handle rather than 3 like its big brother. Here is a negative Stellarium screen shot which is a little easier to see:



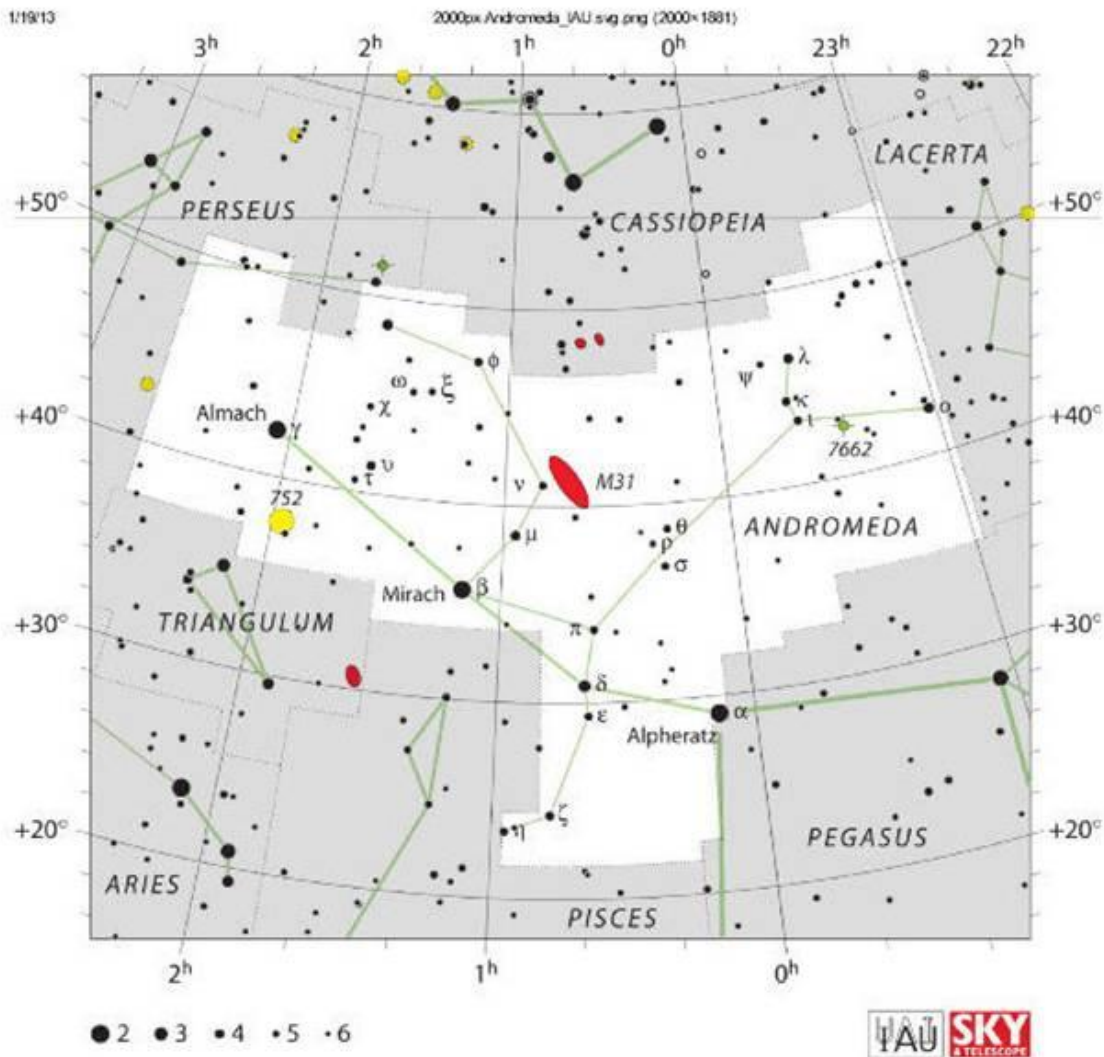
The chart above has North in the upper right and the matrix below lists the 8 members of our little friend in ascending Ra. Start on the right and go left (East) one star at a time.

8 STARS OF PICKARD'S LITTLE DIPPER:

Const/	Alternate					
Name	Name	Ra	Dec	M1	Type	
Lac	HIP 113288	22 57 01	+49 48	4.95	K5	
Lac	HIP 113327	22 57 39	+48 45	5.30	B4	
	3 And	23 04	+50 07	4.60	K0	
	5 And	23 08	+49 22	5.65	F5	
	7 And	23 13	+49 28	4.50	F0	Brightest
	8 And	23 18	+49 05	4.80	M2	

	11 And	23 20	+48 41	5.40	K0	
			+48			
And	HIP 115171	23 20	27	6.25	K1	Dimmest

Finding Pickard's Little Dipper: The chart below is Andromeda from Sky & Telescope's image on Wikipedia. North is at the top. Caph is top-center. M31 is in the middle. Our little friend is on the upper-right at Ra 23h, Dec +50°. The 2 bowl stars on the right are just across the Lacerta Constellation line.



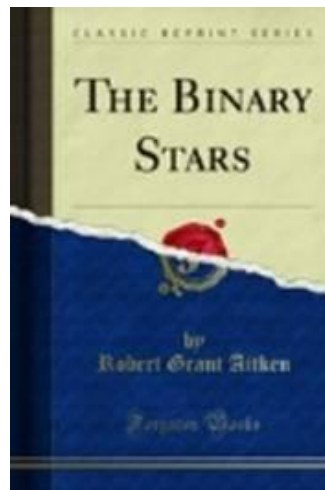
Viewing Pickard's Little Dipper: Since Cassiopeia is circumpolar (at my Los Angeles location of 34° N. Latitude), our little friend is "mostly" in-view all year. (Cassiopeia is around +60° Dec, and our little friend is around +50°

Dec.) In mid-May, it is too near the northern horizon until late in the night. But by mid-June through mid-February, it will trace its path from north to NE all the way around Polaris to the northwest by February.

There are a fair number of Double Stars in this region as shown on the chart below:

Const.	Name	Ra	Dec	M1	M2	Separation
And	Σ 3004	22 21	+44 07	6.3	10.1	14"
And	Σ 2973	23 03	+44 04	6.4	10.1	8"
And	Σ 2985	23 10	+47 58	7.2	8.0	16"
And	Σ 2987	23 10	+49 01	7.3	10.2	4"
And	h 1853	23 11	+45 31	7.2	10.4	30"
And	O Σ 493	23 19	+48 30	7.5	10.5	8"
And	Es 2725 **	23 19	+48 55	7.3	8.6	53"
And	O Σ 500	23 38	+44 26	6.1	7.4	0.5"
And	Σ 3034	23 44	+46 23	7.7	9.9	6"
And	β 995	23 48	+46 50	6.1	8.1	0.7"
And	h 1911	23 49	+42 05	7.4	9.4	22"

** **Es 2725**: Being a double-star chaser, I use the Cambridge Double Star Atlas (CDSA) extensively. The CDSA was co-authored by James Mullaney and World-Renown Uranographer Wil Tirion. In their Introduction, they have listed 84 (!) designations for named stars in their Atlas. We already know most of them, like Bayer (the Greek alphabet), H (William Herschel), h (John Herschel), Σ (Struve), etc. But Es? Turns out it is T.E.H. Espin. The only thing I could find on the net was some lines of text in a book entitled *The Binary Stars*, originally published in 1918 by Robert Grant Aitken. Since it is a **couple of years'** out-of-print, Forgotten Books has republished this gem and I bought a copy from Amazon for \$9.02.



On page 23, I found the following lines of text on T.E.H. Espin:

“In England, in 1901, the Rev. T.E.H. Espin began publishing lists of new double stars discovered with his seventeen and one-fourth inch reflector. The first list contained pairs casually discovered in the course of other work; later, Mr. Espin undertook the systematic observation of all the stars in the Bonn Durchmusterung north of +30°, recording, and, as far as possible measuring all pairs under 10” not already known as double. At this writing [1918], his published discoveries have reached the total of 1,356 [objects].” Republished with permission of Forgotten Books. So you see, research is a good thing.

Es2725 (AKA HIP 115128A/B) A=Mag 7.3 Spectral Type A2, B=Mag 8.5 Spectral Type A2, and its 53” separation is easily split with my 25x100 binos. It is in the same field as orange-red **8 And** and bright white **11 And**. This is a great sight. It is located about 15 arcminutes ESE of **8 And** as shown on the Stellarium screen shot below. (North is at the top):



Here are the sizes of the 3 asterisms discussed:

Little Dipper: 18° Pickard’s Little Dipper: 4° Coathanger: 1.5° (This fits perfectly in the 2.5° FOV of my 25x100 binos)

SO WHY A NEW CATALOGUE?: You saw above what happened to Glen Chaple’s “Chaple’s Arc”. I searched all my star books and could find no name attached to this asterism. I considered contacting the International Astronomical Union (IAU). They almost have a monopoly on naming objects. But there are layers of committees and red tape. I did not get a warm and fuzzy feeling about pursuing that path. But Messier (109 M objects), Struve (2714 Σ objects in his double star Stellarum Duplicum...), Collinder (471 Cr objects), and Caldwell (109 C objects)**, did not use the IAU: they just published their Catalogues. Mind you, I am not in any way comparing myself to those giants of astronomy. I am simply using the same mechanism they used to share their findings by publishing a catalogue.

Special note on the **Caldwell Catalogue: It was published by Sir Patrick Alfred **Caldwell**-Moore in December, 1995, in Sky & Telescope. It contained 109 objects (Like Messier’s Catalogue), but also contained objects in the southern hemisphere. It was arranged by Ra/Dec and the objects selected were numbered **C1**, **C2**, etc., since “**M**” was already taken by **Messier**. He was quite an amateur astronomer, a prolific writer and hosted a BBC TV

astronomy show for some 50 years. He lived an impressive life. You can find more about him on Wikipedia. It is worth the read.



http://en.wikipedia.org/wiki/Patrick_moore

So there you have it (Drum Roll): **The Pickard Catalogue**. The first entry, (and maybe the ONLY entry), is P1, Pickard's Little Dipper. So the big question is does this asterism already have a name? (I haven't seen it named in any of my star books.) So if it doesn't have a name, I think **Pickard's Little Dipper** would be just fine.

Bill Pickard

"The difference between Stupidity and Genius, Genius has its limits." Albert Einstein

