# The Proud Indian

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Image source: Stellarium.org

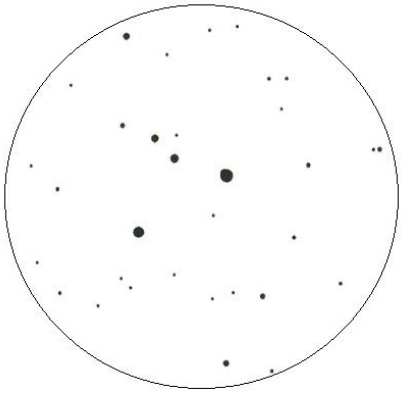
What an honour to represent your nation against the stars in the heavens as one of the newer constellations, Indus, which, as many people know, is named after the American Indians. In China it has also been known as The Persian, a title from the Jesuit missionaries (*Star Names Their Lore and Meaning* – Allen).

This faint constellation is located between the two magnificent starry birds Grus and Pavo. The word "colourful" is synonymous with the American Indians as reflected in their traditional clothing. The constellation was named by Pieter Dirkszoon Keyser. Frederick de Houtman mapped the southern sky during an expedition to the East in about 1596.

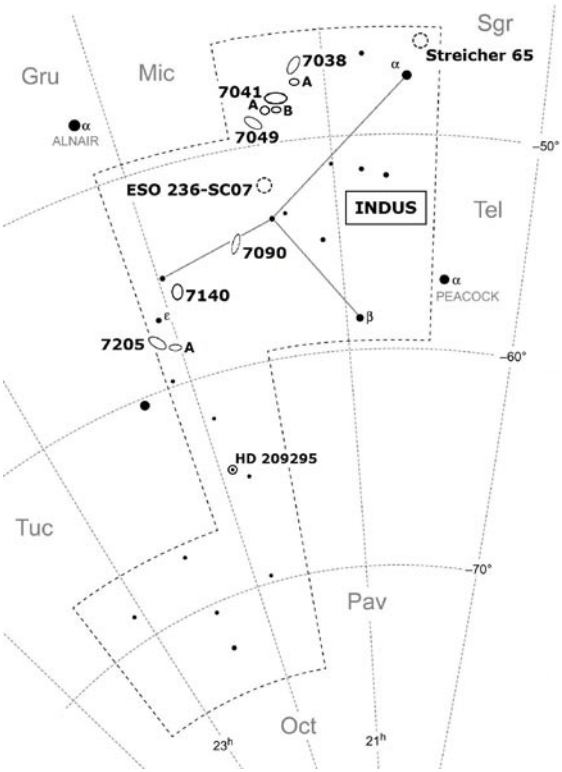
The author's faithful Streicher asterisms are always a blessing to fall back on. **STREICHER 65** is situated 2° north of the magnitude 3 orange-coloured alpha Indi, which could indicate the head of the Indian figure. The asterism displays an elongated handful of varied-magnitude stars with the brightest magnitude 8.2 (GSC 8406808) to the south-east, which may also be a triple star (see sketch). The stars form an upside down *Y* which can be seen very clearly with higher magnification.

Indus is also one of those constellations containing a large number of galaxies. **NGC 7038**, the first of many, can be found in the north-eastern corner. The galaxy is immediately seen as

**Streicher 65 - Asterism - Indus**



a relatively bright oval in a north-west to south-east direction, displaying a star-like nucleus. Higher magnification however, removes the star-like appearance and one is left only with a slight brightening towards the middle. A lovely magnitude 11 buttery-yellow-coloured star can be seen towards the north of the galaxy.




If you are brave and are looking for a challenge, seek out the companion galaxy **NGC 7038A** just 22' to the south. Together with the two galaxies, a lovely triple star completes a triangle to the north-east with colours ranging from yellow to orange.

A degree further south reveals a cluster of galaxies. **NGC 7041**, the northern galaxy, which is quite outstanding against the star field, displays a lovely, very elongated east-west oval with a misty edge. **NGC 7041A** which is situated 12' towards the east was just suspected as a drop of haze, but I could not detect the companion sibling **NGC 7041B** on the western edge. In the field of view there is another galaxy named ESO 235-84, but you need a star map and very dark skies to locate it.

A further 27' towards the south-east the galaxy **NGC 7049** can be found. It is the brightest galaxy of the group with a magnitude of 11.2, displaying a relatively bright oval in a north-east to south-west direction quite outstanding against the star field (see astrophoto).

Indus lacks known objects like globular clusters and planetary nebulae, but there is one lovely open cluster, **ESO236-SC07**, which the Indian man appears to be holding against his chest. This bundle of joy is situated 1.7' north of theta Indi, quite outstanding with more than a handful of various colour stars. Two parts attract the attention

NGC 7049 by Dale Liebenberg

immediately. First there is the northern part, consisting of an outstanding half-moon shape running from north-west to south-east, including the brightest magnitude 6.7 (HD 203021). Secondly, the stringy southern part of the grouping in combination creates a shape excellently resembling a hang-glider. Have a look and see what picture or shape crosses your mind as you look at these stars.

Now shift your attention to the magnitude 4.4 star theta Indi, which is situated more or less in the middle area of the constellation. The double star displays lovely smoky white and orange colours. The system has been previously labelled as "multiple" in the *Hipparcos Input Catalogue*.

One of the brightest galaxies in Indus can be found halfway between theta and delta Indi. **NGC 7090** is a beautiful, bright, large and very elongated galaxy in a north-west to south-east direction, and is actually a barred galaxy seen edge-on. It displays a sudden brighter nucleus, although not outstanding. The more slender north-western point seems slightly brighter than the fatter and hazier south-eastern edge. A lone magnitude 12 star towards the southern part of the galaxy stands out, underlining this rather beautiful, very long spindle. However, field stars draw the attention towards the northern field of view.

Appearing to be showing due deference, the galaxy **NGC 7140** takes its position at the Indian's feet a degree

south-west of delta Indi among faint field stars. The galaxy displays a soft north-south hazy oval with a nucleus slowly getting brighter, but not outstanding. A prominent triangle of yellow-coloured stars overpowers the southern view of the field. RNGC does not list this as a galaxy, but indicates it as possible non-existent. This is one of John Herschel's discoveries during his stay at the Cape of Good Hope in 1834 to 1838. Feedback from Auke Slotegraaf indicates that Herschel observed NGC 7140 (h3892) and 7141 (h3893) on two consecutive nights. The former he described as pretty faint, round, gradually brighter in the middle; and the latter as faint, large, round first gradually, then pretty suddenly a little brighter in the middle. For NGC 7140 he recorded a declination of DEC -57°20'25" (50' north-west of pi Indi, but the position indicating a lovely orange double star) and for NGC 7141 recorded DEC -56°21'52". He commented that it is not improbable that NGC 7141 and NGC 7140 are identical, one or the other being mistaken one degree in polar distance. Still, as both observations are clearly written, and as the difference in polar distance of 1'28" is rather considerable even then, it is necessary to enter them separately. Paturel et al. (1991) note that NGC 7140 = NGC 7141.

Let's now talk about epsilon Indi, which shines with a magnitude of 4.7 and is situated along the western edge of the constellation, 2° south of delta Indi. This faint star is located only 11.8 light-years away, the 17th closest, and racing across 5" in a year towards the constellation Tucana. It has now been discovered that epsilon Indi also harbours a family with a binary pair of brown dwarfs close to it. Another star in the constellation, magnitude 6 rho Indi, also harbours a possible planet at least twice the size of Jupiter.

Barely a degree further south, and virtually on the boundary between Indus and Tucana, the galaxy **NGC 7205** and its companion **NGC 7205A** can be traced down, with one galaxy apparently in Indus and the other in Tucana. NGC 7205 is relatively bright and uneven in texture, elongated north-east to south-west and gradually brighter towards the nucleus. The north-eastern tip is perhaps slightly thinner than the slightly blunt south-western point. It was discovered by Herschel at the Cape of Good Hope, one of the five brightest members of the Pavo-Indus group of galaxies. The companion member, NGC 7205A, is situated just 8.5' towards the west, which I suspect as a diffuse spot with averted vision. Towards the south of the galaxies the star field is rather busy with varied-magnitude stars.

The far southern part of the Indus constellation is crowded with galaxies which spill over the boundary into the constellation Tucana. A special star,

however, in the middle of this galaxy colony is **HD 209295**. A South African team has discovered that this star pulsates in two completely different ways at once – at least 11 different frequencies, nine of them relatively slow (1–3 cycles per day) and two much faster vibrations (about 14–26 cycles per day). The reason is that an invisible companion star orbits each other every 3 days (*MNASSA*, December 2001).

Some time ago, when I visited a nature park in South America, my path crossed that of the true American Indian people. I vaguely remembered then that there is a constellation referring to them in the starry skies, but never thought that I would someday be able to write an article on the now well-known Indus constellation. ☆

| Object | Type | RA (J2000.0) | Dec | Mag. | Size |
|---|---|---|---|---|---|
| Streicher 65 | Asterism | $20^h32^m5$ | -45°18′ | 11 | 3.5′ |
| NGC 7038 | Galaxy | 21 15 2 | -47 13 | 11.6 | 3.2′x1.6′ |
| NGC 7038A | Galaxy | 21 15 4 | -47 37 | 13 | 1.1′xo.6′ |
| NGC 7041 | Galaxy | 21 16 5 | -48 22 | 11.2 | 3.3′x1.4′ |
| NGC 7041A | Galaxy | 21 18 3 | -48 24 | 13 | 1.6′x1.3′ |
| NGC 7041B | Galaxy | 21 17 8 | -48 24 | 14 | 0.3′x0.3′ |
| NGC 7049 | Galaxy | 21 19 3 | -48 34 | 10.7 | 4.3′x3.2′ |
| ESO 236-SC07 | Open Cluster | 21 21 5 | -51 49 | 9.1 | 30′ |
| NGC 7090 | Galaxy | 21 36 5 | -54 33 | 10.7 | 8.1′x1.4′ |
| NGC 7140/41 | Galaxy | 21 52 2 | -55 34 | 11.9 | 3.0′x1.4′ |
| NGC 7205 | Galaxy | 22 08 5 | -57 25 | 11.2 | 3.7′x1.9′ |
| NGC 7205A | Galaxy | 22 07 5 | -57 27 | 13.5 | 1.2′x0.8′ |
| HD 209295 | Star | 21 36 5 | -54 33 | 7.3 | * |