

THE NIGHT SKY NATURALIST, by Bob Vickers

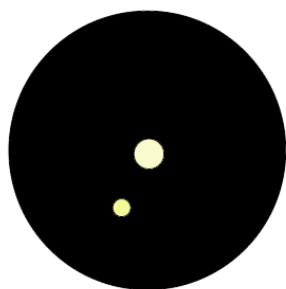
Seeing Double

Copyright © 2009 Robert D. Vickers, Jr.

There's no denying that double or multiple stars are aesthetically pleasing to look at, but what is it that makes them so appealing? For one thing, like exquisite jewels, we like to compare and contrast their brightness and color. A close, bright double of near equal intensities is one of amateur astronomy's most beautiful sights. Likewise, the complimentary colors of a striking orange and blue pair are pleasing.

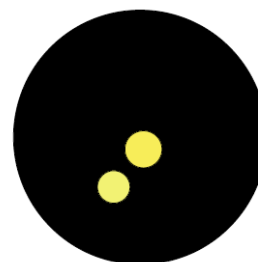
But, I think there is also a secrecy factor involved. Most double stars are not visible as doubles to the naked eye. We think we know them but we really don't. Only with the optical aid of binoculars or, even more so, a telescope does their hidden duality become apparent. We like the pleasant surprise of discovery.

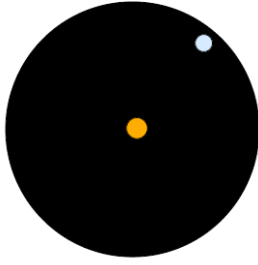
Warmer spring nights bring with them some charming double stars well worth seeking out. Here is a handful to whet your appetite. They are all pretty easy to find, even in light polluted skies.



Zeta Ursae Majoris (Mizar) – (13h 23.9m, +54d 56m) – The middle star in the handle of the Big Dipper, Mizar makes a superwide optical pair with its fainter companion Alcor. This pairing is pretty easily visible to the naked eye and also makes an excellent binocular sight. But Mizar is itself an impressive double easily visible in most telescopes. The primary (brightest) star shines at magnitude 2.3 and is a white to pale yellow-white. 14" of arc away lies the magnitude 4.0 secondary. I see its color as a pale yellow. Mizar was the first double star to be discovered by telescope (by Riccioli in 1650). Its distance is about 70 light years and has an orbital period of many thousands of years. A pleasing view at about 60x.

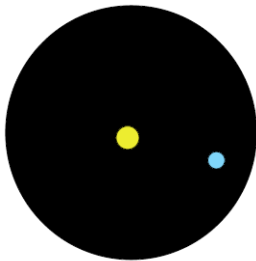
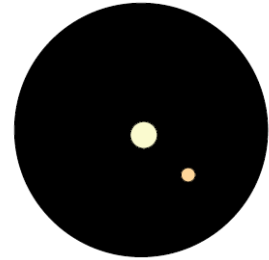
Gamma Leonis (Algieba) – (10h 20.0m, +19d 51m) - Arguably one of the most beautiful doubles in the sky. The bright components are magnitudes 2.2 and 3.5 and are separated by 4.4" of arc (a bit of a challenge in smaller scopes). The primary is a golden yellow while the secondary is a slightly paler shade of yellow. Best seen at about 200x. The double nature of the star was discovered by William Herschel in 1782. It is about 90 light years distant and has an orbital period on the order of several hundred years.





Iota Cancri – (8h 46.7m, +28d 46m) – A gorgeous yellow-orange and blue-white pair. Its 30.5" separation is easily split at 30x but best viewed at around 60x. It is somewhat uneven in magnitude with the primary at 4.2 and the secondary at 6.6.

Alpha Canum Venaticorum (Cor Caroli) – (12h 56.0m, +38d 19m) – A very nice pair with good brightness and some color contrast. The primary is at magnitude 2.9 and has a pale yellow-white color while the secondary is magnitude 5.5 and looks more yellow-orange to me. They are separated by 19.4" of arc and easily split at 30x, but look best at about 120x. Cor Caroli is about 120 light years away.



24 Comae Berenices – (12h 35.1m, +18d 23m) – Another nice pair of color contrasting gems. The 5.2 magnitude primary is a deep golden yellow while its 6.7 magnitude secondary is a soft pale blue. Easily split at 30x. Beautiful at 120x. Separation is 20.3" of arc. It is very similar in appearance to its somewhat brighter and more famous summer cousin Albireo.

I hope you find this little group of doubles as pleasing to observe as I have. If you like observing doubles there are occasional seasonal lists in *Sky & Telescope* magazine, and the Astronomical League offers a Double Star Certificate and pin for observing all 100 on their list. In addition, if you *really* get into double stars, famed observer Sissy Haas has a book called *Double Stars for Small Telescopes* containing information and observing notes on over 2,100 double and multiple stars.

*Parting, they seemed to tread upon the air,
Twin roses by the zephyr blown apart
Only to meet again more close.*
— John Keats, *Isabella*