



News.com Mobile  
for PDA or phone

CNET tech sites: [Product reviews](#) | [Shop](#) | [Tech news](#) | [Downloads](#) | [Site map](#)

Login:    [Forgot password?](#) | [Sign up](#)

[My News](#) | [Readers' Choice](#) | [Extra](#) | [Blogs](#) | [Corrections](#)

[Front Door](#) | [Business Tech](#) | [Cutting Edge](#) | [Access](#) | [Threats](#) | [Media 2.0](#) | [Markets](#) | [Digital Life](#)

[Options](#)



## Humans evolved color vision to see emotion, not food

March 15, 2006 10:29 AM PST

Your eyes evolved to see rosy cheeks.

The eyes in humans and their closest relatives in the primate world are geared to detect subtle changes in skin tone caused by blood oxygen levels, according to a new study from Caltech.

The spectral sensitivity of color cones in humans and chips are somewhat unusual. Bees have four color cones that are evenly spread across the visible color spectrum. Birds have three color cones. By contrast, humans have three types of cones that are sensitive to a limited range of wavelengths. The closeness, however, allows for the detection of subtle tone changes. When someone blushes, the skin becomes red from elevated oxygen levels. If you're exhausted, you become pale from the lack of oxygen. When a primate is ready to mate, oxygen levels rise again leading to blushing. The human and chimp eye can capture these different color levels, which can be signals of fitness or heartiness.

Interestingly enough, primates completely covered in hair have different types of color detectors. The parts of skin (the scalp) that are insensitive to color blushing in humans and chips are also covered in hair. Since the skin there can't help express emotion, the theory goes, it might as well help you keep warm.

"For a hundred years, we've thought that color vision was for finding the right fruit to eat when it was ripe," says Mark Changizi, a theoretical neurobiologist and postdoctoral researcher at Caltech. "But if you look at the variety of diets of all the primates having trichromat vision, the evidence is not overwhelming."

Posted by [Michael Kanellos](#)

### TalkBack

9 comments

#### Humans did not evolve...

[Post a comment](#)

**Mac User** Mar 15, 2006, 1:24 PM PST

#### More Interesting Stuff on Color Vision

**Clive Maxfield** Mar 15, 2006, 12:42 PM PST

#### Thats right we didnt evolve

**Craig Burnham** Mar 15, 2006, 12:06 PM PST

#### Humans didn't evolve...

**Mac User** Mar 15, 2006, 12:03 PM PST

#### Can We Say "Bad Science"?

**Timothy Parnell** Mar 15, 2006, 11:56 AM PST

#### Makes some sense....

**Earl Benser** Mar 15, 2006, 11:45 AM PST

#### Color Vision

**Arlander Shephard** Mar 15, 2006, 11:45 AM PST

[Read more comments >](#)

### TrackBacks/PingBacks

See links from elsewhere to this story.

### About the author



**Michael Kanellos**

is editor at large at CNET News.com, where he covers hardware, research and development, start-ups and the tech industry overseas.

### Recent posts

- [Humans evolved color vision to see emotion, not food](#)
- [Bill Joy and the handshake of the future](#)
- [Killing me softly with salad dressing choices](#)
- [Try on clothes without undressing](#)
- [Humanoid bots at hotel guests' service](#)
- [Speed reading with a game station](#)
- [Authentication tech listens to cardio patterns](#)
- [Keira Knightley, Terrence Howard could win big as Oscars, if Peerflix stats work](#)
- [Yahoo settles speech recognition suit](#)
- [UC Berkeley Dean says watch the three Es](#)

[XML](#) for News.blog Future tech

[+ NEWSBURST](#)

Add this blog to Newsburst

### March 2006 archive

S	M	Tu	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

[« February](#)

[Resource center](#) from News.com sponsors

[Site map](#) | [How to advertise](#) | [Contact us](#) | [Send us tips](#) | [News.com mobile](#) | [E-mail newsletters](#) | [All RSS feeds](#) | [XML](#) | [Linking policy](#) | [Content licensing](#) | [Corrections](#)



**[BNET](#) | [CNET.com](#) | [CNET Channel](#) | [CNET Download.com](#) | [CNET News.com](#) | [CNET Reviews](#) | [CNET Shopper.com](#) | [GameSpot](#)  
| [MP3.com](#) | [mySimon](#) | [Release 1.0](#) | [Search.com](#) | [TechRepublic](#) | [TV.com](#) | [Webshots](#) | [ZDNet](#)**  
Copyright ©2006 CNET Networks, Inc. All Rights Reserved. [Privacy Policy](#) | [About CNET Networks](#) | [Jobs](#) | [Terms of Use](#)