Cockatiel Sex Symbols
by Nancy A. Reed

Those of us that breed Cockatiels are fortunate in dealing with a species that defines in most specimens the adult male and female. In the Normal; and the Cinnamon, Pearl, Fallow and Silver mutations, these sexually dimorphic markings are quite visible in a bird that is eight months or older. The same "tell-tale" colorations exist also in the Lutino (Albino) mutation, although so diluted that individual birds may need to be caught up to be examined under ideal lighting. Fids unfortunately are the elusive exception to all "rules".

However, a perspective pet owner wishing specifically a cock or hen does not want to wait until the bird becomes visually sexable, and by that time more difficult to tame. Likewise, perspective breeders most often must buy future stock at a young age, or be disappointed by waiting and finding no adult age breeders available (or possibly another breeder's "problem" birds). Conversely, the original breeder usually does not have the available space to house all fledglings until birds reach breeding age — not to mention the additional time involved to care for and feed this burgeoning crop.

Therefore, it is expedient to sex Cockatiels as young an age as possible. And yes, there are methods — some 100% accurate, some far more questionable, and some even hovering on the "occult".

The latter "psycho" methods I will mention and dismiss quickly, as my "deja vu", e.s.p., etc., is in its infancy of development. (If I drop a brick and my foot is in the immediate line of trajectory: I get a "premonition" that said foot is going to hurt in a second.)

Some Houdinis can resort to dangling threaded needles over chicks to judge the appropriate sexually defining swing. And granted, my God-given eyesight is auxiliary powered by made-in-Hong Kong lenses, but I cannot detect the pointed "male" eggs from the more rounded "female" eggs. My only experience has been with an occasional "pointed" first egg from a virgin hen, or other infrequent notable deviations. (And yes, often these mildly deformed eggs are viable and do hatch.) But if I had to depend on such rarities for my total production of males, then I owe an awful lot of people an apology for all their hen x hen pairings.

Going from the asinine to the astute, the only 100% accurate method I personally will depend on is in using certain genetic crosses. In some instances, the chicks can be sexed at birth. For instance, using a Lutino male with a Normal hen: all hatchings with "grey" eyes are automatically Normal males split to Lutino. All pink-eyed chicks are positively Lutino hens. In other instances, using various planned arrangements with dark eyed sex-linked mutations or splits, the resulting mutational feather color on some chicks will specify the young birds' sex positively. However, this is not a commentary on genetics. But may I suggest that such an article, listing specifically the crosses that will result in either, all, or some of the young being able to be sexed in the nest, would be of interest to readers and breeders.

Next: the Pelvic Test. This is probably one of the oldest methods in sexing, human skeletons included. Simply, it is the physiological feature that the pelvic frontal protrusions are spaced further apart in the female to accommodate passage of the progeny — in this case, the bird's egg. The male's pelvic bones are closer together. In the adult of any bird, this is quite an accurate indicator of sex. Check a laying hen's pelvic spread. In a Cockatiel, the separation is a generous ½ inch. The male's measurement would be approximately ⅛ inch. The difference between the two is quite obvious at this stage, but so most probably is the dimorphic coloration.
and fertile eggs, so who needs to check?!

Sexing young birds solely according to the pelvic test is in my mind like tossing a coin: 50% odds. Young birds' bones are very pliable. What seemed a "she" yesterday, could appear more a "he" today. Yes, some young hens have and retain a wide space. Some males fledge with pelvic bones almost touching and remain so. But at best, I use the pelvic test only to confirm my hunches through other sexing methods.

In Cockatiels, there apparently is yet another sexing method that depends on markings, or the lack thereof, under the wing. Let us call it the "wing pit" method. Linda Buttstead (FL) mentioned this recently to me and had been using it with apparently 100% accuracy on the Normals and Lutinos she had raised. Her original reference came from an article by George J. Schweiger "Sexing Your Cockatiel" in the American Cockatiel Society's March/April 1978 bulletin.

The gist is that on chicks nine weeks or older, the feathering on the underside of the wing has filled in sufficiently to enable one to observe the markings (or lack of) on those "wing pit" feathers within the immediate 1-1 1/2 inch radial areas of where the bird's wing joins the body. Any yellow on these feathers denotes a hen. Linda describes these markings as "fringing". Mr. Schweiger refers to yellow "flecking" of the feathers. Regardless of semantics, any yellow is apparently the key to females. Mr. Schweiger mentions that the amount of yellow will vary on individual hens, but again, if any yellow is visible, "it" is a "she". Solid coloration of feathers in this small defined area indicates cocks.

This method is mentioned here as a more recent observation of sexing young, and I urge other Cockatiel breeders to further substantiate its accuracy. At the time of this writing, my oldest chick was only one week of age. But upon catching up
some adult cocks and hens of various mutations, I was delighted to find 100% agreement with Mr. Schweiger.

As for me, I have previously placed my bets on the "behavioral" method of sexing, with no wrong guesses that I have been notified of to date. This method is not to the liking of an eager pet owner, as it requires a bird to be 2½-4 months of age. Specifically it means waiting for the young males to start "singing". Some will hesitantly start before being weaned. That's helpful. But it becomes more a matter of finding the hens for lack of vocalization — a process of elimination. And then, of course, there is always the exception. A hen that sings! But in time, such a rare hen will dwindle in her exuberance, while her brothers will increase in theirs, and it may depend more finally on incoming adult plumage to define "her" from "hims".

By "singing", I refer to the "triddings" of the young male that will, with practice, evolve into the Whippoorwill-type call of an adult male. Cocks also have a second "song", but verbal definition has so far escaped me. Regardless, any young male will sound like a beginner flutist experimenting.

Other male mannerisms to watch for are "strummings": rapid beak action on the wires, perch, or other immediate objects. "Strutting" is performed by to and fro movements along the perch with wings held slightly away from the body. But usually the first vocal exercises precede the initial physical displays.

Assuming that a breeder bands his birds (hopefully with American Cockatiel Society bands), the procedure is to identify each bird with some individual easily visible marking when the weaned clutch is separated from the parents. I use a Magic Marker — a different color for different clutches. I make notes on paper of the band numbers and the corresponding visual markings I have made on the underside of the outermost lateral tail flights (these being most easily seen from a distance as the bird perches). I will put one dash on one lateral flight, a dash on both lateral flights of the next bird, and continue through the clutch with dots and multiples of dashes and dots. But no two birds will sport the same markings in the same clutch. Be careful not to mark clutches of the same mutation with the same color, as this could cause confusion.

Then, as I notice a bird "singing", I will put a check mark next to the identifying mark and band number. It is not until a particular bird has accumulated three check marks over a period of at least ten days or more, that the bird be designated as a cock. As stated previously, it becomes more a process of elimination for hens. No "singing": no check marks on my records. But again beware the late blooming male, or "Aida" hen; however, these are rarities.

My mentor, Tony Barrett, uses lipstick for marking young. I cannot but question the psychological impact of an adolescent male to sport "Torrid Pink" on his plumage until that certain Scarlett Letter feather finally drops out!

At approximately five months of age, males that will eventually manifest their designated dimorphic markings (Normals, Cinnamons, Pearls, and less obviously the Lutinos) will begin their molt into adult plumage. Most immediately noticeable is the increase of yellow feathers in the facial mask. Wing and tail flight feathers will gradually drop out to be replaced by the solid adult flights lacking the immature and female "barrings".

Pearl males will replace most if not all of their immature laced feathers on back and shoulders with the solid grey plumage typical of the Normal cocks. It is especially important that Pearl chicks be banding, as adult males will usually end up indistinguishable from adult Normal males. Remember, despite the adult plumage lacking the laced markings, Pearl males are always 100% pure Pearl genetically.

On Lutinos, as stated, the change is less obvious due to the subtlety of contrast between white or yellow, and the deeper yellow markings. I find that by watching the "ventral V", one can avoid constantly catching up Lutino birds to check incoming flight feathers as to lack of dots or barring indicating a cock. The "ventral V" is the triangular section of feathers immediately behind the vent and covering the base of the lateral tail flights. In my experience, I find it easier here to see the barring (or lack of) under normal lighting, that when trying to detect the barring (or lack of in males) on the lateral tail flights.

As the young male bird begins to molt, the solid yellow or white ventral feathers should be fairly obvious in contrast to the immature or female barred feathers. The two long primary tail flights on the Lutino young, adult hens, or adult cocks show no dimorphism.

It is also to be pointed out, that when checking flight feathers on any Cockatiel under one year of age, that you check all flight feathers. A male Cockatiel may not molt out all his flight feathers until over two years of age. However, if you can find even one lateral tail flight with no barring, or one primary or secondary wing flight with no contrasting dots, that "it" is a "he".

As for plucking out specific feathers on young birds to determine sex according to new growth, I have not practiced this, but I would guess after 3 months of age that the
Illustrations by Nancy Reed
new feather would accurately indicate the adult coloration. If plucked at too young an age, the new feather might still emerge with immature color.

I have included some drawings to illustrate the male and female marking on adult Cockerels' wing and tail flight feathers (young would be similar to adult hen's plumage). These are representations of particular feathers from my collection, and selected as being most typical as to color and/or markings. Individual bird's degree of color or markings can vary greatly, most especially in adult hen's lateral tail flights. The number or clarity of barring, spots, or density of flecking is immaterial. Sexing is determined strictly as to the presence or lack of markings in the adult feathers.

When finding moulted feathers on your cage or flight floor, it is most especially difficult to identify adult male wing flight feathers from the lateral tail flights — all being solid in color. These can be determined by shape. Observe that on wing flights, the vanes on one side of the mid-rib gradually diminish and vanish into the quill. The opposite side shows a full rounded area where the feather vanes end. The quill itself is longer on wing flights than on lateral tail flights. The base contour on lateral tail flights shows a “squaring-off” on one side of the quill, and a more gradual “rounding-off” on the opposite side.

While these illustrations are labeled and speak basically for themselves, there are some specific notations that follow in reference to the Normal and particular mutations.

**Drawing 1: The Normal.** The lightest grey tone represents yellow, and appears in varying degrees in all the hen feathers illustrated. The deeper greys and black are basically accurate as to tone, with the male's lateral tail flights (fig. “e”) being the darkest plumage on Normal cocks.

Figures “a” and “b” are wing flight feathers. Sexual dimorphism is obvious. My only comment is to not be concerned by shape or number of dots on your hen's feather, which will vary from feather to feather and hen to hen.

Note the tremendous variation between figures “c” and “d”. Both represent specimens of two hens' lateral tail flight feathers. Fig. “c” clearly shows barring, while fig. “d” is overall motting. But it doesn't matter how the feather is marked. When compared to the solid colored male lateral tail flight (fig. “e”), there is no need to hesitate in deciphering the sex of any of these three feathers.

At a distance, the male and female central tail flights (figures “f” and “g”) might appear identical in most Normals, but upon close inspection, at least some degree of motting can be seen on the hen's feather, while the only variation possible on the male's central tail flight would be subtle shadings of grey.

**Drawing 2: The Lutino (Albino) mutation.** All grey markings represent yellow. On Lutino birds that are heavily washed with yellow to begin with, this grey would indicate a still deeper shade of yellow.

Figures “a” and “b” show wing flight feathers. Figures “c” and “d” illustrate lateral tail flights. We have already discussed the difficulties in sexing Lutinos. The female's markings are difficult to see unless examined at close range and in good light.

I have not included the central tail flights as these are of no use in determining sex. Yes, colorations will vary, but this seems more a matter of the individual bird's intensity of yellow.

The mid-rib in all Lutino feathers is always white, no matter how yellow the vanes.

**Drawing 3: Pearl mutation.** The lightest greys appearing in any of these feathers represents yellow. The mid-rib is always black, as opposed to the white mid-rib on a Lutino or Lutino-Pearl feather.

Figure “a” can vary considerably depending on an individual bird's pearlings and the particular wing flight feather. Figures “c” and “d” again illustrate the degree of variation in markings of two particular hens' lateral tail flights.

Note figure “e”: all but true black coloration. This is typical of most Pearl male's adult plumage, often being deeper in tone than most Normal males' comparable feathers.

A Pearl hen's long central tail flight (fig. “f”) will usually be tipped with grey in reverse proportion to the extent of Pearlings on the body. The more lacings on the back and shoulder areas, the less grey tipping on the two tail flights. I have also observed that in clutches from Pearl x Pearl matings, that those chicks with the yellow tail flights.

The female's markings are difficult to see compared to an adult male's lateral tail flight shown in figure “e”.

Compare this drawing with Drawing 1. Cinnamon markings are comparable to Normal plumage, the only difference being tan vs. grey (represented here as lighter grey vs. darker Normal tones). While specific markings and color vary, the dimorphisms are identical.

**Drawing 5: Lutino-Pearl cross-mutation.** This is the only cross-mutation which I can presently write on from personal experience. If someone breeding other cross-mutations can send me corresponding adult flight feathers, perhaps I can update this report in an additional article.

In this group, the grey areas represent yellow; white equals white. Notice some particular similarities to the Pearl mutation. Figures “a” and “c” in this L-P grouping look like photographic negatives of the comparable figures “a” and “c” in the Pearl drawing. The yellow (lipochrome) that represents the Pearl part of this cross-mutation remains, but the grey (melanin) is replaced by the Lutino lipochrome, which is of less density than the Pearl's, thus the contrast between the two lipochromes remains visible.

Figures “a” and “b” represent wing flight feathers as labeled. In figure “b” there is a very small trace of yellow in the vanes at the base on the narrower side of the feather. Quite frankly, I do not know whether this is “typical” on all adult L-P males' wing flight feathers. (Discussion follows as to this L-P cock.) Figure “c” represents a hen's lateral tail flight. Unless an L-P hen is scrutinized closely, the whole tail appears as solid yellow, and quite noticeably different from a straight Lutino hen sporting white-yellow barred deeper yellow tail flights.

Central tail flights are not illustrated. Most usually adult L-P hens have solid yellow as opposed to the whiter hue of the L-P cock's, but degree of coloration may be individual and not appreciably dimorphic to warrant illustration.

On cross mutations involving two sex-linked birds, it takes a minimum of two years to produce a hen, followed by another two years to produce a male (if brother x sister, father x daughter, etc., matings are avoided).

Through sheer FATE, a young imported L-P male fell into my hands in Feb. 1978, and was recognized as such because some pearlings were still in evidence. (Males of cross-mutations involving Pears lose
some, most, or all of their lacings in the same manner as straight Pearl cocks, and thus on maturity become difficult to recognize.

The following observations are made strictly according to this only L-P male that I know of. (If someone has another, I would like to compare and confirm notes.)

This particular bird arrived with all tail feathers broken. I proceeded to occasionally pluck two or three of these broken feathers over a period of time. Approximating the bird's age at 5-6 months in respect to the degree of barring already moulted out, the new tail growth must have represented adult coloration. One of these new '78 tail feathers is illustrated as figure "c".

Aside from the bird's band, this distinctive pattern became an easy way to pick out the L-P cock from Lutino males (the latters' adult tail feathers were solid in color).

Of even further interest was the observation in 1979 that the next new growth of lateral flights still showed similar markings, but not as extensive (figure "d")

It now remains to be seen whether with age this unique marking that presently designates this particular L-P male from straight Lutino cocks will continue to diminish, or stabilize. Hopefully it will be the latter, and hopefully this specimen is exemplary of all L-P cocks. If so, buyers will have a point of reference in guaranteeing adult L-P cocks. But if it results in progressive loss of dimorphic color, at least for an initial few years identification may be possible by checking lateral tail flights.

All cross-mutations are still in their infancy. Only time will tell concerning idiosyncrasies such as this example; pinpointing calculations in matings to produce cross-mutations; and possible future expectations in triple, quadruple, etc., cross-mutations. We've only just begun!

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You will notice that I have avoided discussion of Pieds in this article. I do not breed Pieds primarily due to lack of space. Therefore I asked Tony Barrett for his sage comments on sexing Pieds in light of his experience in breeding this mutation. The following quotes are from his return letter.

"Re sexing of pieds — good luck in trying to explain how to sex pieds by visual means! First of all, heavily marked pieds have either all or partial yellow tails, making tail barring a nebulous indicator of sex. Further, even when tail feathers are all or mostly grey, tail barring is inconsistent from specimen to specimen. However, if one were to sort out a group to say 100 mature birds by amount of barring, I would guess that probability of correct sexing would be increased from 50% (by wild guessing) to maybe 75%-80%. The bottom line is that barring is an indication of sex, but not necessarily a consistent dimorphic... Incidentally, if the tail feathers are yellow, barring is not present on hens (or immatures for that matter)" as would be visible on Lutino hens or youngs.

Tony had included two dark (yellow background heavily suffused with grey flecking) tail feathers, both being the outer most lateral flights plucked from the right side of two spring '77 banded Pied birds. Both birds were over 2½ years of age, all immature flights had moulted out, and both birds positively sexed. While both feathers basically are identical in degree of greying, one definitely shows "barring". But contrary to usual dimorphic markings, it is the male's tail feather that is striated, while the hen's feather lacks even a subtle suggestion of barring. In the drawings offered here, the most similar examples would be comparing Cinnamon feather "d" (for this Pied male) and Normal feather "d" (for this Pied hen).

Tony remarks: "True this is not a random choice, but rather a specific selection to show the inconsistencies that can (and do) exist."

Mr. Barrett later in his letter mentions the absence of "underwing spots". . . Any pied worth his/her salt won't have enough grey under the wing to show spots. I netted a few hen pieds to have a look under the wing and couldn't find any spots on the yellow feathers (like the lutino). But then old Dad's eyes ain't what they used to be. I have noticed that on some pied-lutinos (hens) a few underwing feathers in a group do have spots. These same feathers are also a different shade of yellow that those feathers not showing spots. I suspect that if the lutino factor were absent, those spotted feathers would be grey."

Tony finally states that he does not pay much attention to dimorphism as a means of sexing, but rather depends mostly on observing behavioral attitudes by the same means as I have noted earlier in this article. "Whistling of the male is the only positive method of sexing Pied cocks. Females must be sexed by default, i.e., if not caught whistling, they are presumed hens."

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O.K. I have attempted to mention and explain the sexing methods that I know of and illustrate the hen vs. cock feathers that I am familiar with. Perhaps some of you have comments or further knowledge that should be shared. I would appreciate any additional information forwarded to me through the AFA address for a future updating of this article, or a letter directed to Sheldon Dingle for his "From the Editor's Desk" column.