Notes based on Joe Morlan's Ornithology class lecture February 26th, 2009.
Joe Morlan is not responsible for these notes, any errors or omissions in them are mine.

White-crowned Sparrow subspecies:

Two populations have dark lores, neither of them show up much at the coast. The dark-lored birds are quite unusual in CA. Joe has seen none in the Bay Area ever, one or two in southern CA. The dark-lored populations are the eastern nominate *leucophrys* and the Sierra Nevada population *oriantha* which breeds above the tree line and winters mainly in Mexico.

There are two coastal populations which are yellow-billed and pale-lored: *nuttalli* is a permanent resident along the immediate coast in CA, the one that breeds in SF. It is augmented in migration and in the winter by flocks of slightly larger *pugetensis* from the coast further north. They are a little bit grayer but the differences between them are really hard to tell. Their songs are somewhat different also. These pacific populations are slightly browner overall than the other populations.

Another subspecies with pale lores like the Pacific birds, but a pinkish bill and gray back similar to the eastern birds, is *gambellii*, a huge population that breeds from Alaska through the Yukon and the Northwest Territories almost to Hudson Bay. We get a lot of them, they are the most widespread of the White-crowned Sparrows in CA in the wintertime, particularly in the interior. *Pugetensis* tend to winter more along the immediate coast, but in the Central Valley and in the foothill regions there are mostly *gambellii*.

The immatures are harder to tell apart.

subspecies	Sibley's name	range	lores	bill
nuttalli	Pacific	permanent resident CA coast, breed here in SF	pale	yellow
pugetensis		breed along pacific northwest coast come here in the winter	pale	yellow
oriantha	Interior West	breed High Sierra, southern Cascades, Rockies winter mostly in Mexico	extensively dark	dark pink
gambellii	West Taiga	breed from Alaska to Hudson Bay widespread in CA in winter, esp. in the interior	pale	orange-pink
leucophrys	East Taiga	breed in Canadian tundra east of Hudson Bay	dark	pink

A note on the bend of the wing, yellow in pacific and white in other populations (probably the marginal coverts). Sibley names this and illustrates it on the two birds facing the reader. I looked through hundreds of photos of White-crowned Sparrows. The only ones where this "field mark" was visible was one of a flying bird and a few of hand-held birds. Every single naturally perched bird had the bend of the wing tucked in under the feathers of the sides of the body.

There is a **difference between a finch and a sparrow** in the head shape and bill shape. The finches are somewhat bulkier, larger-headed birds with rather thick, short, stubby bills. Sparrows usually have thinner, longer bills.

Carpodacus finches

The males have some red coloration on their body and head, the females are streaky and brown. Females are easier to identify than males.
Of the four species the Purple Finch and the House Finch regularly occur in the Bay Area.
The streaking on the underparts of these finches never coalescence into a spot the way it does on most sparrows.
The fledglings have little wispy white downy tufts that stick up on either side of the head, called stipes, almost like a Horned Lark.

Purple Finch

OCCURRENCE
Widespread in northern coniferous forests, at middle elevations.
Migratory, particularly the eastern subspecies.
In the east it is one of the winter eruptive species. Purple Finches reach almost to Florida in certain winters.
There is the phenomenon of so called winter finches, particularly in the northeast. Those northern finches in the east include species like Purple Finch, Pine Siskin, both crossbills, Pine Grosbeak, Evening Grosbeak. In the far west most of these species are either erratic or non-migratory. Nevertheless there are downslope movements and there are incursions of species like Purple Finch or Pine Siskin. Pine Siskin especially is eruptive in CA.
Purple Finches are somewhat eruptive in CA. They breed at middle elevations in the mountains and they may move into the lowlands in rather large numbers. These eruptions are usually caused by a massive food crop failure after there has been a bumper food crop. In Joe's neighborhood in Pacifica this is a very good Purple Finch year, they come to his sunflower feeder. Very few House Finches this year using it.

TWO SUBSPECIES
Essentially two populations:

- Nominate *purpureus* breeds through much of Canada and in the northeastern US, winters in the eastern US.
- Along the Pacific coast *californicus*. It is somewhat smaller.

The plumage differences are more evident in the females (see under field marks).
There is at least one specimen of a bird that has been identified as *purpureus* in CA. It was found dead on one of the Channel Islands. Without a specimen it would be really difficult to build a strong case for a bird being *purpureus* because there is a lot of variation in *californicus*. Joe has not knowingly seen an eastern Purple Finch in CA.

SUPERSPECIES WITH CASSIN'S FINCH
There are no Purple Finches in the Great Basin. Note that the distribution of the Cassin’s Finch fills in the missing distribution of the Purple Finch like a jigsaw puzzle. The two of them together form what is usually referred to as a superspecies. The individual members of a superspecies are called allospecies because they are allopatric (having different ranges). They form a patchwork of geographic replacements that have little or no overlap with their closest relatives. The situation is very similar to having a species with several subspecies.

SIERRA NEVADA

Purple Finches breed commonly on the west slope of the Sierra Nevada and up to the Cascades. In higher elevations they are replaced by the Cassin's Finch. On the east side is the Great Basin, that is Cassin's Finch territory.

Both species do occur together on the west side of the Sierra Nevada at certain elevations. The Cassin's Finches come down to about 5000 feet or so, Purple Finches reach that level.

House Finches can occur at that level, too. So it is possible in some localities to get all three species in one spot.

HABITAT

Not a particularly common bird around dwellings, although if you live in good habitat you may find a lot of Purple Finches.

Purple Finches seem to prefer two different habitats: in summer mature forests, in winter riparian habitat where there are tall willows and alders, but they also move around in different habitats. They are particularly fond of the little cones that alder trees have during the wintertime. They also feed on willow buds and on berries. They forage on thistles, may join flocks of goldfinches there. They like habitats with pine trees. Monterey Pine is fine, there are plenty of these in SF.

Purple Finches are much less likely to perch on wires than House Finches are.

FIELD MARKS

Reasonably large bill, generally fairly straight rather than swollen. Here at the west coast some of them have a slightly more swollen bill with a stubby, slightly arched culmen, very unlike Cassin's Finch.

The forehead can be either steep or flat, depending on the mood of the individual.

Do not show much of an eye ring, if any.

Rather muddy look to the dark and brown areas on the back.

Tail shape: more notched than that of the House Finch (central tail feathers clearly shorter than outer ones, the feathers becoming progressively longer towards the outside of the tail), but it is dangerous to use that as a field mark, because the separation of individual feathers can give a notched effect on any bird.

Undertail coverts can be streaked, especially in immature females (a purported field mark of Cassin's Finch).

If you are banding: Purple Finches bite, House Finches do not.

Male

The flanks help identify the male finches. On the Purple Finches any streaking you see is very subdued and blurry and usually has some reddish suffusion. (House Finch has bold, crisp brown streaks, the red does not come down on the flanks.)

No obvious brown streaking on the belly, just very faint on the flanks.

The Purple Finches in the east have essentially no streaking on the flanks at all, our California Purple Finches are a little closer to House Finch than the eastern ones are.

Raspberry red face with an underlying dark shadow of the female face pattern. Males show a pale pinkish color where the superciliary would be on the female, darker cheeks, a dark malar, a pink malar stripe.

More red on the crown than House Finch, which has the crown mostly brown and red just on the forehead and back a bit along the sides of the crown.

The amount of red coloration on Purple Finches is fairly consistent. It is extensive and has a raspberry red quality. On House Finches the amount and the extent of the coloration

is hugely variable. If you see a flock of birds and some have a little bit of red and some have a lot of red, you are probably looking at House Finches. If they all look the same and are pretty well colored all over, the coloration is reasonably extensive but not usually expressed as bright red or orange red they are probably Purple Finches. The House Finch is the brighter colored of the two species.

Female and First Year Male

Purple Finches take two years before the males acquire their red plumage. When they are one year old they look very much like females. Many times people will see a singing Purple Finch and be surprised that the bird is a female. But those are immature males, female Purple Finches do not sing.

The face pattern is the easy way to tell the female Purple Finch from the female House Finch: dark cheek, pale supercilium with some streaks in it, pale malar stripe, dark malar. Supercilium is not not really the right word, a supercilium is over the eye, in Purple and Cassin's Finches the markings start at the top of the eye and then extend backwards over the ear coverts.

The differences between the subspecies are more evident in the females. In the female *californicus* the underparts are more buffy and they are browner on the back, less white. One thing that Joe sees a lot in *californicus* is a greenish cast to the back of the females, you never see that in *purpureus*. It may be somewhat age related.

Broad distinct streaks essentially uniform across the entire chest and down onto the flanks.

VOCALIZATIONS

They sing a lot in the spring. The song carries a long way and is very distinctive. A kind of low pitched, rather grinding song, rather unmusical compared to that of the House Finch and much better structured. Kind of a grinding weedely deedely deedely deedely. Very fast. Like a Warbling Vireo on some kind of illegal medication.

Call notes also very different. Typical call note a very musical chirpy double note selitt (Joe) or churlee (Nat Geo). Sometimes two together, selitt, selitt. Can make people think of singing Cassin's Vireo because it sounds sort of like a question and answer.

Cassin's Finch goes churlee, churloo, also kind of question and answer. The Purple Finch does not do the answer, but it can be confusing.

In flight a very sharp pit, pit. The birds have an undulating flight. Fly-over Purple Finches can be readily identified as such because of the distinctive pit-call.

Cassin's Finch

Used to be called Cassin's Purple Finch.

Very closely related to Purple Finch. Very similar to Purple Finch.

OCCURRENCE

In general occur at higher elevations in the Sierra Nevada than Purple Finches or House Finches. It is a bird of the Great Basin with an eastern migration route which does not take it coastwise, it does not occur west of the Sierra Nevada, is a very scarce bird in the SF Bay Area. Joe has only ever seen one Cassin's Finch in SF. It is over-reported in the Bay Area, mostly by inexperienced birders.

It is claimed that it breeds in the coast ranges at high elevations in Monterey County and possibly elsewhere, but Joe has not encountered it in those areas. He has been where people said they heard them but was not convinced that those were Cassin's Finches.
Tied to conifers more than the Purple Finch.
They come to the edges of roads to feed on salt licks where salt is used to keep the roads from icing over.

FIELD MARKS

A paler bird with longer wings and a longer bill than Purple or House finches.
The longest and straightest bill of our three *Carpodacus* finches.
Similar head pattern to Purple Finch with a pale superciliary and a pale mustacial stripe separated from the throat by a rather dark malar.
The amount of the superciliary varies, structural details and some other additional plumage details are helpful in distinguishing Cassin's from Purple finches.
The pale superciliary area has streaks and spots within it in both Cassin's and Purple finches. The field guides make the supercialiary too muted compared to what we actually see in life, it does stand out and is noticeable.
Tend to show a conspicuous pale area around the eye or an eye ring, much more prominent than on the other species. It gives the bird a rather different expression.
Strongly streaked back with dark and light stripes forming rows, sort of mantle stripes. Compare that with Purple Finch, just muddy brown and some dark on it.
Streaks on the underparts finer and thinner than the broad blurry streaks on Purple Finch.
The wings are longer with a longer primary projection.
Streaked undertail coverts, but so have some Purple Finches. House Finches also typically show streaked undertail coverts.

Male

Crown and forehead bright red. The bright coloration is confined to the crown and forehead. It stops rather abruptly at the nape, there is a strong contrast to the fairly pale pink nape. That kind of contrast is not evident on Purple Finches.
Often there is a little cut-off where the red forehead is kind of bushy and sticks up and then it cuts back right at the top of the head and it's paler there, so there is a little notch in the profile.
The superciliar and malar regions are much paler pink.
Chest paler pink than on the other species, fades to whitish pink on the flanks, much more so than on Purple Finch.
Also more pale on the upper parts than on most Purple Finches.
There is a pinkish cast to the back that you can find on both birds.
Some very fine streaks on the flanks. The streaks on the Purple Finch are broad and blurry on the females, the ones on the males are suffused with reddish, but what's underlying are broad and blurry markings, not these little fine markings, which are much more like House Finch. House Finch males have strong streaks on the flanks. Not all Cassin's Finches show any flank streaking at all, which sometimes makes people wonder if they might be looking at Purple Finches. Some have intermediate streaks on the flanks, not pencil fine but not blurry. The streaking on the underparts is comparable to the streaking you may see on House Finches. House Finches are quite variable in that trait, the streaks vary from quite fine to intermediate.

Female and First Year Male
Like Purple Finch, Cassin's Finch males don't get red until their second cycle.
Both field guides understate the strength of the head pattern of the female Cassin's Finch.
One slide showed what appeared to be a strong white wing bar. Joe sees wing bars like that much more often on Cassin's Finch than on Purple Finch.
Also, on females especially but also on some males, one sees a lot of white in the back.

VOCALIZATIONS
Song very melodic, sweet and rather unstructured, a little like a very, very fluent House Finch. Joe does not believe that they sing away from the breeding grounds.
Perched birds give a little two-parted call that reminds Joe a lot of the selitt-note of the Dusky Flycatcher, it rises in the end. You hear that a lot at higher elevations in the Sierra Nevada.
Joe does not know the flight call, but he believes they are difficult to tell from the flight notes of the Evening Grosbeak, but he does not spend enough time in the Sierra Nevada to have a real strong sense of some of those calls.
Some people once they learned to identify Purple Finches flying overhead start identifying Cassin's Finches flying overhead. That is ok in the high Sierra, but Joe does get a little worried about casually identifying Cassin's Finches based on fly-over birds giving funny call notes. Use great caution before claiming Cassin's Finches anywhere in the Bay Area!

House Finch
Called the "Linnet" in some of the older field guides.

OCCURRENCE
Originally an abundant bird in Mexico and California, that is its core range in the west.
One of our more spectacular and abundant song birds, frequently seen throughout the Bay Area, in the non-breeding season in flocks of hundreds at times. During the nesting season they tend to separate out into territories, frequently in the fall and winter flocks of these may be sitting on wires.

The House Finch is a bird that survives very well in a huge variety of habitats, including arid deserts, it is quite at home in Death Valley. It is very adapted to human situations, does nest on window ledges and human made structures and will readily come to tray tables of bird seeds. (Purple Finch will come to a feeder like this but never nest on a window ledge.) Variety of foods: buds, seeds, insects.

Looking through House Finches Joe seldom finds other species with them. Has not been productive for him scanning House Finch flocks for rarities.

RELEASED IN THE EAST AND HAWAII
Used to be sold as "Hollywood Finches" in the East. After it became illegal to sell native wild birds in 1940 pet shop owners released the birds to avoid prosecution.
They took hold and eventually expanded clear across NA in very short order.

Those birds are a genetic subset of the birds we have out here, they are different. The birds never spread from the west out to the east by themselves. The Great Plains were a barrier to them.

The House Finch has been introduced onto the Hawaiian islands. Because of the type of food available on the Hawaiian islands the House Finches there never get bright red, they all are yellow and orange colored birds.

There is some interesting evidence that the birds in the east are genetically different. The eastern males apparently have the red coloration under stronger genetic control than the western ones, probably because all birds have descended from a very small group of released birds which apparently had a good gene for bright red coloration.
The coloration is known to be effected by their diet, and generally dependent on the quality of the food that the male gets while the feathers are growing. Foods that are rich in carotene proteins will produce brighter red coloration. Studies in the west have shown that females choose males which have a brighter red coloration and avoid males which do not. A bright red male is signaling that he is a good provider, he is able to find high quality food. This is called “honest signaling”, because it is directly related to the fitness of the bird and its ability to find high quality food.
The eastern birds on the other hand appear to remain bright red regardless of the quality of the food they get, there is a genetic difference in how they metabolize their food and acquire the red feather coloration. Now we have a situation where they joined each other and the genes are flowing in both directions in the population. This never got studied in any kind of detail.
The released eastern ones probably came from Mexico. There are no recognized subspecies. Fascinating why the eastern ones were so mobile and able to expand so rapidly over a period of fifty years, while the western ones, which were native to this area, never made it across the plains.

Unlike most other species House Finches feed their babies seeds as an important part of their diet. Most baby birds are incapable of digesting seeds, the House Finch is an exception. This also protects them against cowbird parasitism, cowbirds do not even lay their eggs in House Finch nests.

FIELD MARKS
Bill very finch-like, very thick at the base, not as long as that of the Cassin’s Finch and usually not quite as powerful as that of a Purple Finch.
No face pattern, uniformly streaked throughout. Some individuals may show a very faint superciliary, but that is not the same as being a Purple Finch.
Overall plain muddy pattern to the back, similar to the Purple Finch but without the Purple Finch's distinctive head pattern.
In fresher plumage they can have gray tips to the coverts and show faint wing bars.
Streaked undertail coverts.
Tail square, all of the tail feathers are of the same length. (Purple Finch notched tail with outer tail feathers longer than the central ones.) The problem comes when a House Finch has the tail feathers separated and you get the outlines of the individual feathers forming a notch.

Male

House Finch males get the red in their first year.
The amount of red in House Finch is highly variable, much more than in Purple and Cassin's finches. Some of the variation is age related, in their first year they are less likely to be able to find the best food.
The typical pattern is a streaked bird, no face pattern, no pale supercilium. Often bright red on the forehead and outlining the usually brown crown. This pattern can look almost like a supercilium.
The chest area is bright red and is usually together with the forehead the reddest part of the bird. Compare to Cassin's Finch, in which the forehead is the brightest part and the chest is very pale.
No red on the boldly streaked belly and flanks, the red bib stops and does not penetrate down to the flanks, the rest of the underparts are boldly streaked. You will not find that in the Purple Finch, and on the Cassin's Finch there are the finest little streaks that are hard to see.
The red is much more confined on most House Finches, they do have a red spot on the upper tail coverts and part of the rump, the red coloration on the breast and lower face is about the same color as the red on the forehead and over the eye. The crown is generally brown.
There is very little if any streaking on the back, the birds are quite plain on the upper parts. The suffusion of pinkish that we saw on many of the Purple Finches on the back of the birds is not evident on most House Finches.

Female

Plain gray brown head that is uniformly streaked throughout with darker gray brown streaks, there are no markings that you would ever notice.
Underparts pale with pretty evenly distributed streaks, becoming finer down onto the lower belly. The entire underparts are streaked, unlike most of the sparrows where the streaking is confined to the breast and often coalescing into a spot, nothing like that on any of the finches.
Sometimes a little bit of an eye ring, don't confuse with Cassin's Finch!

VOCALIZATIONS

Song very melodic, very beautiful but rather unstructured, tends to go on and on, frequently ending on a rising whistle.
Like a typewriter going on and on and then comes the carriage.
Typical call note also a rising whistle, a questioning "what?", a little bit like a Hooded Oriole only not as emphatic.

Common Rosefinch

Not the closest relative to the American *Carpodacus* finches.
One record from the Farallon Islands, a female that was banded.
A head like a House Finch but a big, swollen bill which is strongly arched.
Very unlikely that anyone would recognize a Common Rose Finch in the field.