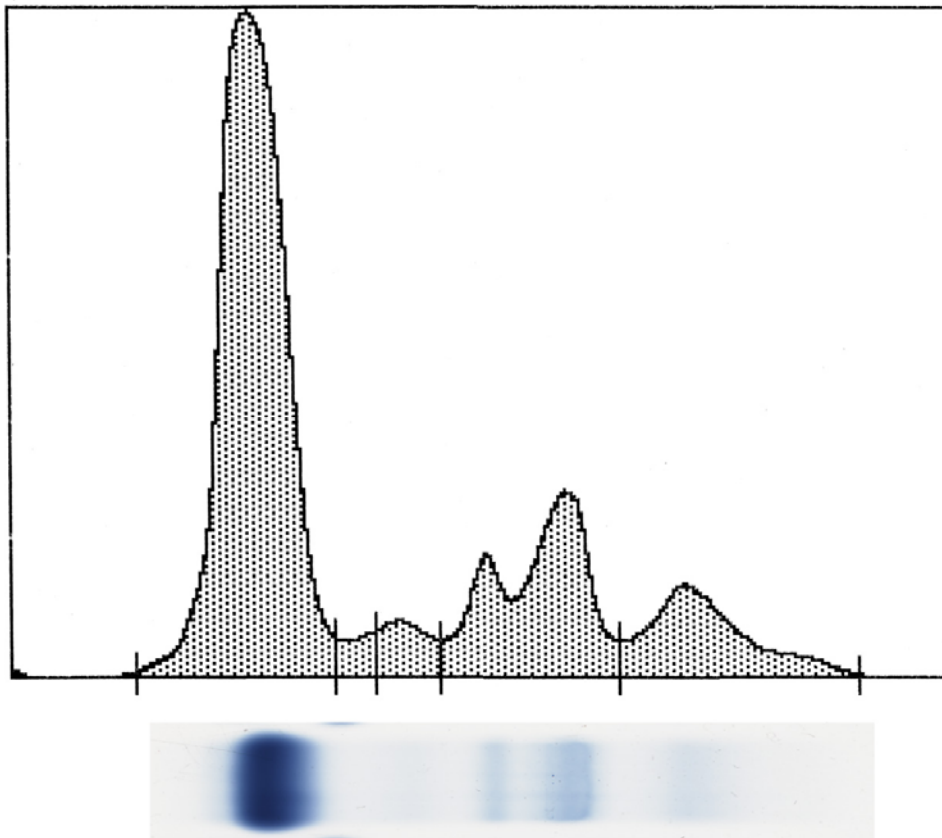


## Clinical Case 2: Prognostic Value of EPH

### Normal EPH

This is a normal EPH pattern from an African Grey Parrot. African Grey Parrots often have low or no visible prealbumin fraction. Albumin, in a normal animal, is the predominant fraction as shown here. Albumin can decrease with acute inflammation. Alpha 1 globulins are not commonly found in significant levels in psittacines (but are a major fraction in other avian species). A small alpha 2 fraction is demonstrated below. This fraction can increase non specifically with acute inflammation. In African Greys as well as a few other parrot species, beta globulins are present as a double peak. The gamma globulins shown below conform to the normal polyclonal resting pattern.

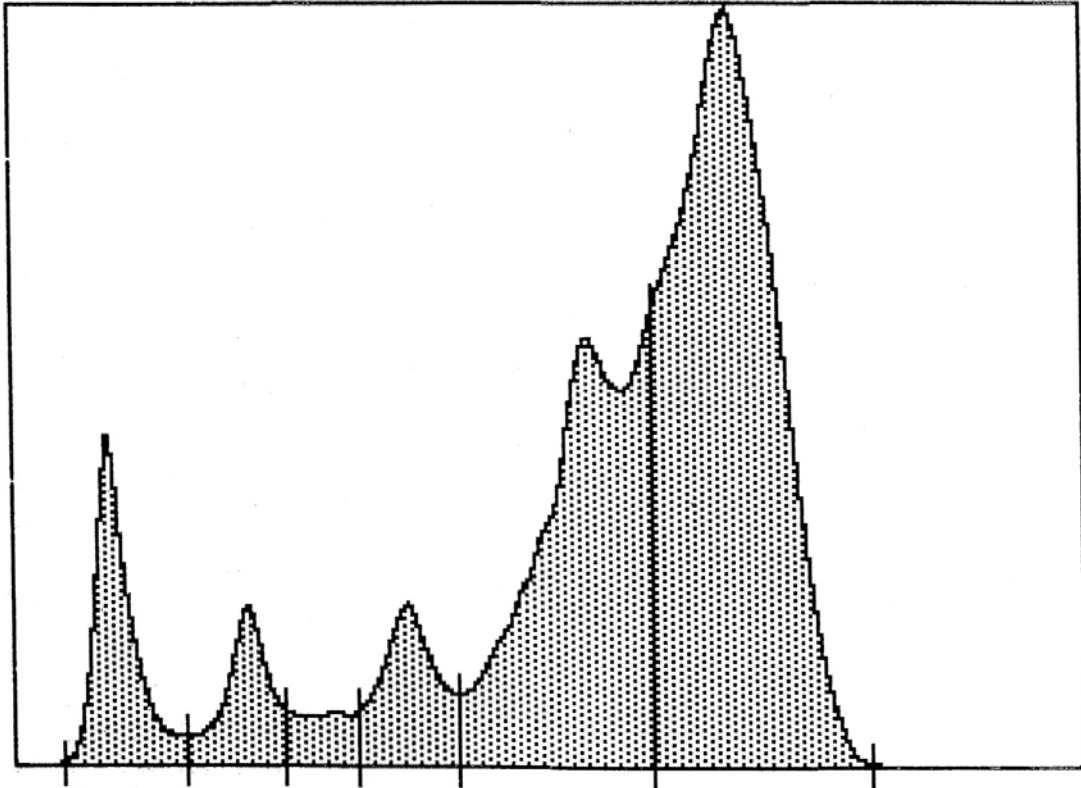
In EPH interpretation, the clinical pathologist examines both this densitometer tracing as well as the gel itself (shown underneath the tracing below). The two give a combined impression with the quantitated fractions to lead the pathologist to give the submitting veterinarian the most accurate interpretation possible.



From left to right: albumin, alpha 1, alpha 2, beta, and gamma globulins. The prealbumin fraction is absent in this bird. The A/G ratio is 1.59.

### Looking At Changes Just Over a Couple of Days

A blue and gold macaw presented with lethargy, weight loss, and watery bright green stool. A presumptive diagnosis of acute chlamydiosis was made and the bird was begun on treatment while hospitalized. Although a final diagnosis was not made in this case, antibiotics proved to be the cure. Unintentionally, blood was drawn on two different days during the hospital stay. With the positive response to treatment, you can see the significant EPH changes.

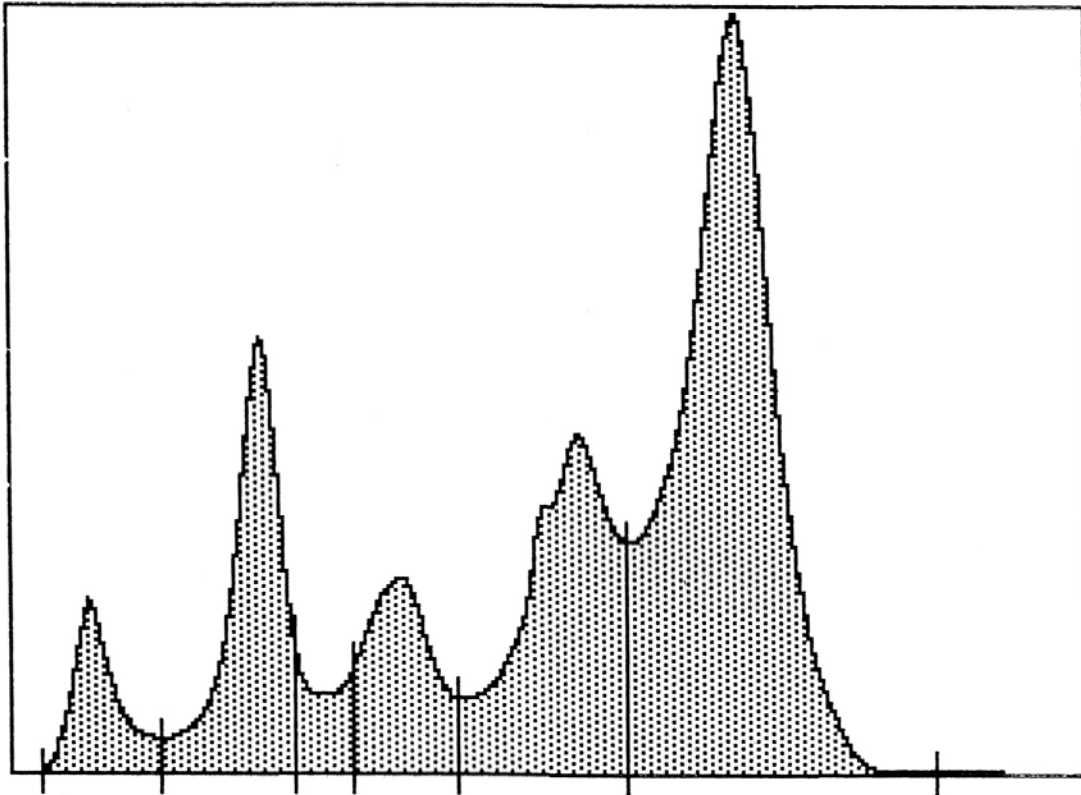


#### Day 0 – presentation and hospitalization

Fractions from left to right: prealbumin, albumin, alpha 1, alpha 2, beta, and gamma. This is a typical EPH found in birds with acute chlamydiosis.

A/G ratio: 0.15 (normals 1.5-3.5)

Albumin: 4.7% (normals 34-60)



Day 2 – 2 days after treatment started

Fractions from left to right: prealbumin, albumin, alpha 1, alpha 2, beta, gamma. Note the change in albumin between these two EPH samples (look at the amplitude of the 2<sup>nd</sup> peak).

A/G ratio: 0.25  
Albumin: 14.8%

**Looking At Changes for Overall Prognostic Value**

Obviously, you cannot draw samples on a daily or even weekly basis for your clients. However, if you have a patient with a significant disease process, you can monitor their recovery by successive EPH over a longer period of time. This will give you a picture of the health of the animal especially to ensure there is not continued immune stimulation.

This is the continuation of the work done on the acute chlamydiosis case.

Day	A/G ratio	% Albumin	% Gamma globulins
0	0.15	4.7	49.9
2	0.25	14.8	47.7
14	0.78	21.5	31.5
33	1.11	28.5	24.5
70	1.60	38.9	18
Normal values	1.5-3.5	34-60	5-16