UFO UpDates Mailing List

Re: Kenneth Arnold Sighting

From: **Bruce Maccabee <brumac@compuserve.com>**
Date: Thu, 17 Jun 1999 00:28:23 -0400
Fwd Date: Thu, 17 Jun 1999 11:06:49 -0400
Subject: Re: Kenneth Arnold Sighting

>Date: Mon, 14 Jun 1999 21:44:13 -0400
>From: James Easton <pulsar@compuserve.com>
>Subject: Re: Kenneth Arnold Sighting
>To: UFO UpDates - Toronto <updates@globalserve.net>

>Off the list, Bruce has helpfully clarified some details which
>have explained the full context of Arnold's letter to the Air
>Force.

>Confirmed is my contention that Arnold was in fact still
>searching for the missing C-46 marine transporter when his
>sighting occurred.

Well, it would appear from his Air Force letter, quoted below
that he was at a lower unstated altitude while searching because
he mentions climbing to 9,200 ft (give or take 1,000 if air
pressure setting not correct....etc.). He climbed to a higher
altitude an trimmed his plane out (adjusted control settings to
fly steadily at a constant altitude and speed.... pilots want to
comment?) and "settled down" to enjoy the view as he flew toward
Yakima.

This says to me his searching was over by the time the sighting
began.

>It did not take place afterwards, when Arnold was en route to
>Yakima.

>I'm sure we can now conclude the debatable points as much as
>they ever can be.

>Bruce,

>In his report for the Air Force, Arnold wrote, in full:

>"I had made one sweep of this high plateau to the westward,
>searching all of the various ridges for this marine ship and
>flew to the west down and near the ridge side of the canyon
>where Ashford, Washington, is located.

>Unable to see anything that looked like the lost ship, I made a
>360 degree turn to the right and above the little city of
>Mineral, starting again toward Rainer. I climbed back up to an
>altitude of about 9,200 ft.>

>The air was so smooth that day that it was a real pleasure

>flying and, as most pilots do, I trimmed out my airplane in the
>direction of Yakima, which was almost directly east of my
>position and simply sat in my plane observing the sky and
>terrain".

>Ashford is to the north-east of Mineral and if he made a "360
>degree turn to the right" and was "starting again toward
>Rainer", which is also north-east of Ashford, I'm not sure how
>he was also travelling in the direction of Yakima.

It would appear that Arnold, that bad boy(!) hasn't told us
every second by second detail of exactly what directions,
speeds and altitudes he flew his plane near the end of his
search for the downed military transport. Perhaps he thought
the Air Force would be bored to learn how many zigs and zags \
he m,ade and exactly which direction is aircraft was pointing at
a particular time. He recaled making a turn over Mineral after
being over a ridge near Ashord...and so what? What counts is
what happened after he trimmed out his plane to head toward
Yakima. At that point the flight path was not
complicated....easy to remember...and likely to be correct.

>The account in his later book is also different, making no
>mention of 'heading towards Yakima' and stating, "It was during
t>his search and **while making a turn of 180 degrees over
>Mineral**, Washington, at approximately 9200 feet altitude" when
>he first noticed a 'bright flash'>

>The direction he was actually travelling in relation to the
>objects is crucial and I would have to be dubious about his
>'perfect' sighting conditions, as outlined in the Air Force
>report.

As I said above, after all the maneuvering to carry out the
search he climbed in altitude and set the plane on a simple
straight course for Yakima.,...very likely to be correct!\

>That aside, whether Arnold was coming out of a 180/360 degree
>turn, or 'cruising' due east, he was still in 'search' mode, so
>what was his airspeed likely to have been?
Above 80 mph "Crash Speed."

>Would he be undertaking a search at close to maximum speed, in
>treacherous terrain, or would his airspeed be much less, giving
>him time to hopefully spot the missing aircraft and earn an
>instant ten thousand dollar fortune?

He would be traveling AT LEAST fast enough to avoid stall. Ity
is my recollection that stall speed is around 80 mph, although
for some lightweight craft it might go down to 60. HOwever,
his aircraft was not that lightweight. I would bet his speed
toward Yakima was higher than the search speed, probably over
100 mph.

>Some further comments re the respective figures you had quoted:

>Altitude: As you may have noticed, I mentioned to Don Ledger
>that I had seen a reference to pelicans being known to migrate
>at over 14,000 feet, considerably higher than your estimate
>(although it maybe makes no difference).

I have analyzed the bird situation assuming the they were at the
same altitude.

>Visibility: I'm not sure if I've highlighted this before. Glider
>pilot Mike Havener, who wrote an article 'Soaring with Pelicans'
>describing his extraordinary experiences being joined in flight
>by these gregarious birds, was asked if he could offer an
>experienced opinion on this point. He replied, >

>"Visibility depends on several factors. The one having the most
>effect of course is how much 'haze' or other particulate matter
>is in the air (i.e. smog, smoke). At low altitudes, visibility
>is lowered because of this.

>Myself, (a pilot with average eyesight) I can distinguish the
>basic shape (a body with wings) of these pelicans from about 4
>miles when flying above the haze. From 4 to maybe 6 miles they
>become small dots. Beyond that, I'd say they would probably not
>be distinguishable other than some sort of relative motion that

>may catch your eye".

>Presumably we keep in mind that Arnold noted how perfect the
>visibility was that day.

Yes... but it would be nice to know what the background was like when Mr. Havener saw the pelicans at up to 6 miles (did he measure the distance? How does he know it wasn't 3 or 7?). Did he see them against snow?

>Speed: It might be a mistake to underestimate just how fast
>these birds can fly. Although awkward on the ground, with that
>10 feet wingspan they are majestic in the air and I've already
>provided wonderful evidence from Mike Havener that a flock of
>pelicans were comfortably flying with him at 52 m.p.h. Mike also
>writes in his article that, "I reluctantly sped up to 80 m.p.h.
>to put some distance between us".>>

One wonders how long and at what altitude they can maintain 52 mph or there abouts.

>>There's maybe another factor to consider. If any formation of
>>birds observed a larger object flying towards them, it seems
>>>way, possibly reaching their top speed if necessary.>

In this case, if they were approaching Arnold's track at his altitude, they might swerve away.

>So what if - and we are only considering 'what if' calculations:

>Arnold's airspeed was closer to 60 m.p.h. and our conceivable
>birds were travelling at 30 m.p.h., or some identical ratio
>where Arnold's speed is twice as fast - say, 80/40.>

Better make it 80/40 to be on the safe (for Arnold) side.

>Plus, the 'objects' are first sighted four miles away

OK, but not directly ahead. They are seen to the left. Note that from Mineral, Mt. Rainier is to the left and the objects were first seen to the left of Rainier.

Hence a complete specification requires a radial distance from Arnold, say 4 miles, and a distance north of his (almost) direct track to the east.

>At 60 m.p.h., Arnold's approaching them at 1 mile per minute.

and the birds are doing 30 mph, 1/2 mile/minute ......and Arnold's plane goes into a stall and he crashes....

>After 1 minute, if said birds remained stationary, they are
>still three miles away.
You've moved Arnold 1 mile along his path toward the east...

>Except that they are moving towards Arnold's flight path at 5
>mile per minute.

HUH? I presume they are not 300 mph birds, but rather that you meant they are traveling 0.5 miles per minute. They are flying south.

And, unless they started only 1/2 mile north of his path (or less than 1/2 miles) they have not yet reached his path.

If they started 1 mile north of his track, by the time they get to hi track,..and are directly ahead of the, Arnold is closer to them than 2 miles (in fact they are about 1.9 miles ahead of him.... Reference Pythagoras and the assumption that they are 1 miles north of his track when they are 4 miles away from him.)

If they were 2 miles north of his track when he first saw them (at an angle northward of about 30 degrees), then it took them 4 minutes (at 30 mph) to reach his track and at that time.... he was there too. They crashed!

>At what angle though?
I gave possible angle above.
and in a in a previous post.... and PELICAN PARTISANS

see below....

>Anyway, at some point, they theoretically pass Arnold's flight
>path, heading in the approximate direction of Mt Adams.

Yes. Has Arnold passed them yet?

>They're also still heading away from Arnold and if he turns his
>airplane **due south**, they will continue to travel further
>away.

Well..... they continue south, with Arnold on their tails, more
or less...and going twice as fast as they...

>Arnold will eventually make some headway towards them, however,
>if he has already decided these objects are much further than
>they truly are, there's no point in him pursuing them. Come on!

If they are close, as they would have been if birds (within a
couple of miles at most) he woudl realize it by the parallax
effect... the rate of rotation of his sighting line as he flies
along at twice their speed and observes the sighting direction
from him to them with respect to numerous background reference
points (mountains). Yeah, there's no point in pursuing them
because he realizes he is catching up with.... birds!

>So far as I can see, there's no evidence that he did.
Yup.... he couldn't catch up with objects doind 1,700 mph.

>We do know that after one minute and forty seconds, he's
>determined they are already at Mt Adams and distant, hardly
>visible objects.
Yup..... Super Pelicans

>Does this scenario allow the possibility that these were not
>distant 'objects' - only some 4 miles away, yet sufficiently far
>and moving fast enough to always be illusory against the snow
>covered mountains?

Huh? ALWAYS illusory against the snow covered mountains? Arnold
would have to be a complete novice to flying to think that
objects at 4 miles or less, going more slowly than he, were at
much greater distances and going much much faster than he....
especially after his crucial "bird plucker" test of flying in th
same direction as the objects.

>If not, for the sake of a best/worst scenario, let's finish off
>the discussion by upping the bird's airspeed to 50 m.p.h. -
>which they can do - drop Arnold's "coming out of turn and
>searching" to 60 and put the 'objects', in 'perfect visibility',
>i>nitially five miles away.

>Do you reckon it's still an untenable (if unpalatable)
>possibility?

I'll accept 50 mph for the birds and even 5 miles for a "setup"
as long as you accept 100 mph for Arnold's plane. But....before
accepting 60 mph for Arnold you have better get permission from
a knowledgable pilot as to whether or not Arnold would be likely
to trim out his plane at a snails-pace 60 mph (assuming he could
go that slowly!).

.....

PELICANS
For Pelican Partisans Only:
(MODIFIED from the original presentation a week or so
ago)

Let's forget the claim of going in and out of the mountains for
the moment and simply concentrate on the directions to the
objects (a) when first seen, (b) when passing Mt. Rainier, (c)
when in the direction of Mt. Adams. Assume Arnold was close to
Mineral, Washington, about 25 miles radially from Rainier; more
specifically, 23 miles west and 10 miles south of Rainier. That
puts Rainier at 23 degrees north of due east of Arnold or at
azimuth 90-23 = 67 degrees (north is azimuth 0 degrees).

OK, get yourself some graph paper with 1" squares (or larger)
and let 1" = a mile (or some other convenient square size on the

graph paper).

At the left side of the paper near the middle place a point. That is Arnold's starting position. Let north be "up" on the graph paper. Draw a line from Arnold's starting position at a azimith of 15 degrees. This is approximately the direction to Mt. Baker.

Draw another line with azimuth 67 degrees. This is the direction to Mt. Rainier (about 25 miles away..... it will not appear on your graph paper unless you have BIG paper or squares smaller than 1"). Draw another line at azimuth 95 deg. This is Arnold's track toward Yakima. Draw a final line at azimuth 136 deg. This is the direction to Mt. Adams over 50 miles away. Now let's construct a diagram of ARNOLD vs the PELICANS.

So let's characterize Pelicans this way:

wingspan - 10 ft
length - 3 ft (? a bit much?)
TOP speed - 50 mph or 0.83 miles/min or 73 ft/sec
TOP altitude - 14,000? ft.
Flight Direction: 170 azimuth (could be 180 or 160...won't make much difference to this disaster)

Let us charactersize Arnold by
altitude - 9,200 ft
speed - 100 mph or 1.67 mi/min or 147 ft/sec

Note that this estimate of Arnold's speed is probably low. We also characterize this reconstruction by the overall time of the observation. Arnold said 2.5 - 3 minutes. Let's pick 2.5 (as being advantageous to the P hypothesis) In that time birds fly 2.5 x .83 = 2.1 miles In that time Arnold flies 4.2 mi

Now go to your finely executed graph paper with the radial lines emanating from Arnold's starting position and follow me. Mark 4 miles along the 15 deg azimuth radial. This is the assumed initial distance of the pelicans. At this distance they would appear as dots against the sky...or mountainous background (Ignore observation by of arnold about metallic-like bright flashes).

What do we find at the _start_ of the sighting? -angular size (birds seen nearly head on, flying south) at same altitude, and 4 miles away angular size = arctan (10 ft/4 miles) = 0.47 mr = 0.027 degrees (mr = milliradians).... detectable; no shape ON _his_ horizon because we have assume the same height as Arnold

Now draw a line from this initial bird position along the 170 azimuth direction. Make the line 2.1 miles long, the distance the birds flew during the 2.5 minute sighting and see where it ends. Amusing.

On my diagram it ends about 2 miles north of Arnold's path. But by this time Arnold would be 4.2 miles along his path, and the pelicans would be about 3.5 miles behind him and to his left. This means that at all times they would have been to his left and the sighting line to them would rotate from ahead-left to behind-left. Please keep in mind that this is a DYNAMIC situation: Arnold and the pelicans are moving. If one is clever one can find a point of closest approach by marking off time intervals and measuring the distance between th plane and birds at the various interval positions. Try 15 second intervals.. At APPROXIMATELY 90 seconds they are closest... a distance of about 3 miles.

But.....

Arnold has already crossed the path of the oncoming pelicans and they are at an angle of about 115 degrees to the right of the direction Anold is heading.

One can hardly imagine Arnold describing this situation as saying that the "saucers" flew down the hogback chain of mountains toward Mt. Adams.

(pluck, pluck.... do I see falling birdfeathers?)

Oh Pluck, says Easton! Let's try another scenario

Ignore Arnold's claim that the objects flew over the mountains south of Rainier and ignore his claim that they were last seen in the direction of Mt. Adams.. Now you can accept the Pelicans. Right?

If Arnold turned his plane under these circumstances it would have been a turn to the left and he would have been flying northward, opposite to their direction of flight.

Now, as an alternatives assume the initial sighting azimuth was not 15 degrees. Try something more "realistic." Assume Arnold was wrong in saying he first saw the objects north of Rainier. IGNORE THIS OBSERVATION OF ARNOLD. Instead, assume he first saw them in the direction of Rainier. SO, mark off 4 miles along the 67 degree azimuth.

Now draw a line 2.1 miles long along the 170 azimuth of the bird track and note the following AMUSING result:

the birds reach Arnold's path at about the time he would arrive.... in fact, if my drawing is correct they pass about 0.1 miles in front of him at 2 minutes and 22.5 seconds (give or take a few seconds) after the beginning of the sighting.

Hence to accept this birdbrained hypothesis we must assume he couldn't realize they were birds from a distance less than 1000 ft....although other experienced flyers could not only realize they were birds but even identify them as pelicans from a distance of several miles!

There is another slight problem..... Arnold wouldn't have seen these birds silhouetted against Mt. Rainier until that last half minute of his sighting. Therefore he coul not have timed their flight "from Mt. Rainier to Mt. Adams" over a duration of 102 s seconds.

Therefore to keep pelicans in the running...ooops, flying... we must assume Arnold did not see them crossing Mt. Rainier until the end' of the sighting and then he had about 5 seconds to time them flying apparently from near Mt. Rainier to Mt Adams (which would result in a calculated speed of about 17,000 mph for pelicans). ALSO, we assume he did _not_ turn his plane to fly along with them because the 2.5 minutes were over within seconds after they flew past (and he then left them behind and far to his right).

Anyway, I invite Pelican Partisans to invent their own reconstructions and prove that the objects could have been pelicans. Please be specific as to which of Arnold's sighting details we no longer need to accept as accurate in order to accept the pelican hypothesis as accurate.

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