

Ellis Beymer, B-17 Navigator
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Tell me about your experience in the Army Air Corp.

Ellis: Well, I went into cadet training and there was a lot of testing. It was to decide what we were qualified for, if indeed we were qualified. You know, if the Army thought we were trainable to take a crew position. And I qualified for pilot and for navigator and for bombardier, so I had all the choices available to me. I opted for navigation, I guess for a couple of reasons.

I wanted to be an engineer if I could finish college and I felt that navigation was closer to that than pilot. I wasn't sure I wanted to make flying a lifetime career anyway. And also the washout rate was pretty high and I wasn't real sure that I could get through it and not be washed out and I didn't want to fail at it so I thought well, I knew I could ace the navigation which, which I did. And that's how I got into navigation.

I was a navigator on a crew that was kind of cobbled together in Mountain Home, Idaho, and I wasn't assigned to Mountain Home, Idaho. They were putting together a B-24 group and training there to go overseas someplace to a combat area. The crew I ended up on, the pilot of that crew had a medical problem and he wasn't able to stay with it so the guy that ended up being our pilot had been in a staff position but he turned out to be a heck of a good pilot. He was you know, a very bright, very intelligent sort of a guy.

And I wasn't supposed to be on that crew, I was in a replacement-training unit over in Casper, Wyoming, and got orders one day to report to Mountain Home, Idaho and I didn't even know where Mountain Home, Idaho was. But I got shipped over there by train in the dead of winter in January and got stuck on that crew. So as I say, the crew was kind of cobbled together.

And we were in B-24's. They were brand new and we flew them from Mountain Home, Idaho down to Brazil, across the Atlantic to Dakar, South Africa and then on up to England and we finally ended up at our base. It was a brand new base. They'd just finished it and we were the first ones there.

Later we switched over to B-17's because we were in the 3rd Division. The 1st Division was all B-17's and they were the original guys that flew combat. The 2nd Division was all B-24's. The 3rd Division was a mix because they didn't have enough B-17's to fill the thing out, so there were about 4 or 5 groups that were B-24's. And they wanted to get rid of the B-24's because they couldn't fly 'em together in formation. They had to fly them separately. So I flew about 11 missions in B-24's and then we switched over to B-17's.

How did you feel about switching over to B-17s? What were the differences?

Ellis: I didn't really know. I don't think I knew that. It was just something that was happening. We were just taking things as they came. From a navigation point of view, I

didn't see a heck of a lot of difference because they both had the basic equipment and there wasn't much navigation equipment anyway, in those days. It was just what we called dead reckoning.

But we found out after we switched over (to B-17s) that we were... instead of getting missions into France, which most of our (B-24) missions were into France, now our missions were into Germany. I mean deeply into Germany, so that made a lot of difference. And the whole situation changed, as far as combat. Not to say we didn't get shot up in France. We did, but not like we did in Germany.

Did you feel the B-17 was more rugged than the 24?

Ellis: I think the general feeling was, the consensus seemed to be that it was a safer airplane, that is, it would take more punishment. Now they both could be brought down with a, you know, a shot in the right place, but I think the B-17 proved that it could take more punishment and still, you know, stay in the air better than the B-24.

The B-24 was a higher performing aircraft. It could carry a larger bomb load. It could carry, I think, 8,000 pounds maximum provided they adjusted the fuel load. And the B-17 could carry only 6,000 pounds of bombs, so there was a difference there. The B-24 was a little faster, it was... even though it was kind of a boxcar, the wing on it was a high performance wing.

I think from a pilot's point of view, the B-24 was harder to fly in formation. If you were the lead plane it didn't make any difference... you'd fly it on autopilot anyway, so it didn't really make any difference. But the guys who had to fly wing positions had a tougher job in the B-24. It wasn't as stable and they had to work harder. So they had hours of really hard, strenuous kind of work keeping that thing in formation.

And it couldn't fly quite as high. 25,000 (feet) about the tops and the 17 (we) could go up to 30,000 feet, which was a little bit safer from anti-aircraft fire.

Tell me about your role as a navigator.

Ellis: Well, navigation in friendly country, like in this country, there wasn't, still wasn't very much. There were radio ranges that you could use. And there were radio beacons that you could use. And that was about all there was.

In combat, the Germans turned off all of their radio stations. There were no beacons on; there were no radio stations on and one piece of equipment that we did have in both aircraft was called a radio compass. And it still exists today, as a matter of fact, in all aviation. It's not used very much but it still, still exists.

But navigation over there was strictly dead reckoning. Dead reckoning meant that you had a plotting chart, you could plot coordinates, you know, positions on it. You could draw lines, you could measure the course and the angle.

If you were lucky you could get a wind drift. You had to know what the wind was because it was blowing you one way or the other; if it was head on it was slowing you

down, if it was on the tail it was pushing you. If it was on one side it was blowing you away... and you couldn't hold a course unless you knew what the wind drift was gonna be. So the drift sight, if you could see the ground, was a tremendous help, and I had a couple of airplanes that had a gyro-stabilized drift sight, which was just a dream, I mean, you could really measure drift, that most of the planes didn't have.

And we were lead crew from the very beginning. And we had two B-24's that had gyro-stabilized drift sights. One of them was the one we flew over from the states and we never flew a combat mission in that 'cause it went to a modification center after we got there and we got another B-24 and it had a drift sight. And then somebody flew it one day on a practice mission, came back and collapsed the nose gear. (Laugh) The nose gears, I mean the drift sight was in the nose and it just, it chewed up my drift sight and they wouldn't put it back together for... 'cause they didn't have another one, so that was a valuable thing that I lost.

But it was all dead reckoning other than that, you know, you just, you had to...if you didn't know what the wind was you had to go by the briefing. We always briefed what the winds were forecast to be and you'd use that. It was better than nothing.

Tell me about using a compass and your watch and how you had to time things out.

Ellis: Well, let me talk about getting the formation together over England. Over England they had a bunch of radio beacons and we did have this radio compass. And we would form on the on those beacons. And they were scattered all over the northwest part of England, that is, north of London.

And we'd set up... we had preset courses that we'd fly from one to another and you'd make a dog-leg. And whoever the lead group was gonna be would form on the first one. You know, they'd get their squadrons together in a box formation and they'd fly the dog-leg and they'd meet another group coming in at that next point and then they'd had a dog-leg and at the end of that dog-leg you would meet up with, with the wing formation.

And you kept going like that as you climbed in altitude and the different groups came in at different, different angles. Timing had to be within 30 seconds - wasn't always. But the dogleg gave you a chance to adjust it. If you were a little late you'd cut it short and if you were a little long you'd, you'd stretch it out a little bit. And that was a lot of work getting those big formations together, you know, like 500, some of them were a thousand planes, but if there were a thousand planes it was, there were also B-24's involved. But a 500 plane raid, it would be all B-17's.

Tell me about mid-air collisions and problems forming up because of the weather.

Ellis: They were disastrous. Just tragic sort of things. You always did the best you could but when you've got several hundred airplanes flying in the same airspace along with clouds and everything else you know you're headed for problems, you do the best you can. So, that's as far as the formation was concerned.

As I say, we used the radio compass for that and later on we had what was called a British "G" system. It was a hyperbolic grid which was much more accurate and I had one in my plane, and that was... it was just more accurate. We could get our timing better with that. But it was only good for about 50 or 60 miles, which would get us, you know, maybe 20 or 25 miles past the enemy coast and then it would fade out cause it just didn't have the power. And then we were just back to basic dead reckoning navigation.

Tell me about your role as a lead navigator.

Ellis: I think our, you know, our routine was the same for starters, you know, getting up and getting dressed and, you know, going down to the mess hall, 'cause that was the first thing we had to do was go get breakfast. And then we went directly down to the briefing facility. And depending on, on what, what my role was, if I was gonna fly, and sometimes I did briefings as staff navigator, and didn't fly.

But if I was gonna fly then you'd go get ready for the general briefing, for the main briefing, where you found out what the targets were and what the timing was and all of that sort of stuff. And they presented information, general information on the type of target it was, what we were going after, what we were trying to do.

And then after that broke up, the bombardiers went to a separate briefing and the navigators went to a separate... in another briefing room, the pilots stayed there and got a pilot's briefing - information that we really didn't have to have.

The navigator's briefing was the longest briefing of the three because there was the most detail. Went through everything: all the coordinates, things to watch for, all the flak areas because we wanted to stay out of the flack. We didn't want to, you know, edge the formation into a flak area.

And we got all of our, you know, got all of our charts and everything, be sure that we had everything and we did a time hack, everybody, you know, set their watches so we got our coordinated. And we would then, you know, a G.I. truck would take us out to the airplane. The rest of the crew would be there, they were ready to go. Just ready to fire the engines when we got out there, unless there was a delay or something like that for weather but we were the last ones aboard.

Tell me about having the PFF on your plane. What was it?

Ellis: Okay, someone asked what PFF was. In some of the records, we have a new history book that came out and some of the guys got and it mentioned that it had a lot of information on the missions and it mentioned PFF.

(LAUGH) I was asked what it stood for and I couldn't remember but I think it's it stood for Path Finder Flight or something like that.. And it was kind of a nickname for the aircraft itself. What that meant was that the lead aircraft was gonna be a pathfinder aircraft and the lead air... the pathfinder aircraft had a special mapping radar that took the place of the ball turret and it dropped down underneath the airplane after you got in the air, and it also could be retracted up.

It had ground mapping capability as well as bomb aiming capability through I'm not sure how exactly it worked; I think through the bombsight, 'cause the bombsight did the computing for, you know, when we wanted to release the bombs for that target that was way out there.

We weren't, you know, we weren't too (refined) yet. But ground mapping we used for navigation as best we could because it was just another input and we didn't have many inputs as to where the heck we were. So it had that and also the bombing capability. The three navigators, one of them was what we called the Mickey operator. He was a navigator himself and the dead reckoning, DR navigator occupied the normal position for a navigator in the nose of a B-17. It was a little table with instruments around a little seat about so high and with a, you know, seat belt on it bec... a jump seat.

And the and then there was another little jump seat kinda hung on this, on the side of the nose, inside, of course and that's where I sat as command navigator. And my job was, you know, kinda make the decisions as to when we're gonna turn the formation, because you can't turn a big formation very fast.

If you want to be on course after the turn you gotta stay way, way ahead ahead of it and, and plan that turn. And you can't turn a formation fast, if you turn it the low aircraft is gonna fall out of the sky cause he's having to slow up and the guy above can't go fast enough to keep up. So you had to turn the formation very slowly and for some of those big formations we started to turn as far as 25 miles before we got to the turning point; instead of a sharp turn we just made a very gentle "S" curve. So that was part of my job.

The other part of it was to look out the window (LAUGH) and if you could see the ground did what was called pilotage navigation. We'd just look out there and you see something you can identify, like a, a town, if you can identify it or a railroad or a highway or something you can identify and kind of, you know, you watch it go by and look at the time and you'd estimate how many miles this side of it you were, if you weren't directly over it. And feed that to the DR navigator and he'd log it and also plot it on a chart. You're giving another little "X" as to where we really were relative to the course we wanted to be on.

So the three navigators, you know, worked together to feed information to to the DR navigator who was keeping the log as to where the heck we were at exactly what time and help us forecast when we needed to make our turns and if we were... sometimes, you know, we'd... there'd be flak areas that we weren't briefed. And if we were over 'em we'd try to, you know, slide over to the side, try to figure out which side it was coming from and slide the whole formation away from that as best we could. So we'd have to make adjustments. And sometime the command pilot for the whole formation's sitting in the right hand seat, right up above you, and he says "Jeeze, can't you guys get us out of this stuff?" And, you know, we'd try to, try to do that and keep track of where we were so we didn't, you know, get lost.

Did you ever feel like you were in more danger by being the lead crew?

Ellis: I can't say that I felt anything. We were just so terribly busy all the time that there just wasn't room for emotion. And I think of that as an advantage. It made it a lot easier. You just, if something was gonna happen it was gonna happen, there was nothing you could do about it. And we didn't dwell on it. We just didn't... there was a job to do and we were just busy as all get out and I didn't worry about it.

Tell me the story about stealing flak suits.

Ellis: (LAUGH) Oh, gosh! What would happen, you know, before a mission the crew chief, who was the guy who was responsible for maintaining that particular... he was assigned to an aircraft. That was his airplane and believe me they got to thinking it was really their airplane.

But anyway, they got a ration of flak suits and they were put at the various stations in the airplane. Well, some of the some of the enlisted, I guess I have to charge the enlisted guys because the officers were at briefings, anyway, someone would go and cannibalize (LAUGH) an airplane next door and get another flak suit and they'd bring it in and sit on it. The flak suit was like a vest and you'd wear it like a vest, you know, but you didn't have one underneath you. So they'd once in a while steal 'em. And we also had helmets. Steel helmets.

Any stories about your crew coming back on one engine or with major flak damage?

Ellis: I've got to say, we were damned lucky. Well we were... kind of as an aside, I think we were, we were terribly lucky, our crew in many, many ways. We had an excellent crew and we survived and none of us were seriously injured.

One time in B-24's, for some reason or other, we didn't drop the bombs at the target. I don't remember why but we didn't. And normally you don't like to do that but we brought 'em back. And when... after we got on the ground and we're looking at holes in the airplane, because we had experienced quite a bit of flak, we noticed that there was a big hole in one of the bomb bay doors. And also found there was a big hole in the top of the aircraft in the bomb bay area. And we looked at the bombs and that anti-aircraft shell had gone up through the bomb bay, ticked one of the bombs and went out the top to the airplane. Why it didn't go off I don't know.

I say we were one of the luckiest crews in the world that it didn't go off. And (the flack shell) was a dud, I suppose. And so, you know, we thank the good Lord for protecting us on that. We lost a lot of engines. Never lost more than one that I remember but other crews lost, you know, a couple of engines. And if, you know, you lose two engines on one side it's kind of, it's kind of bad news.

As another aside, if you interview Bear Claw (Robert Berclough), he can tell you a good story about that. I won't tell it, tell his story but they almost didn't make it. And they had the commanding officer... he had the commanding officer sitting in the right hand seat. But that's another story.

Was it 35 missions that you had to fly?

Ellis: I don't think we always knew. It was changing. It had been originally 25 missions and then they upped that to 30 missions and then they upped it to 35. It turns out that lead crews only had to fly 30 missions. And... but you had to have been a lead crew on every mission. I qualified for the 30 missions so I only flew 30 missions.

Did that seem like an impossible goal?

Ellis: We didn't know. At least I just didn't dwell on that. And I know earlier, the real early crews in the life of the 8th Air Force, their attrition rates were very high. And statistically you could figure you were never gonna make 25 missions. And there weren't very many that did. So it was much, much worse.

The fighter activity was much worse in the early days. We didn't have much trouble although we got, you know, some planes shot down from fighters, no where near as bad as it was in the early days. Flak was a real problem because the Germans had installed anti-aircraft guns everywhere.

A little anecdote on that, we were coming back from a mission in, well into Germany, I don't remember exactly where, but the winds were extremely strong. And after we were coming back we were getting flak and it was continuous. Normally, you know, you'd fly through a flak area and you'd get flak for a little bit and hopefully you'd fly out of it. We weren't flying out of this one.

And I looked down and son-of-a-gun, there was a railroad track and there was a train down there with flak cars behind the train, chugging along and popping at us. And it was going as fast as we were because of that strong headwind. And I said, "My God!" and I called the pilot, "Change course 30 degrees left!" and we banked the whole formation and got 'em out of there. Only time I ever saw a flak train but, sure enough, there was one there.

What do you remember about your last mission?

Ellis: Nothing. Except when I got home I was... (LAUGH) thanked the good Lord.

What do you remember about "Little Friends" (fighter escorts)? Did you guys have escorts?

Ellis: Yes we did. Before D-Day, before the invasion, escorts could only go in about I don't know, couple of hundred miles or so and then... it was the limit of their fuel even though they carried auxiliary tanks and they'd drop the (empty spare) tanks.

They had to fly from England. They didn't take off the same time we did; they took off much later than we. And then they'd climb on course and catch up with us, and to minimize the amount of flight time they had, by the time they, they caught up with us.

After the (D-day) invasion, and we finally got a foothold on the continent, now there were airfields where we could base the fighters. And the fighters were all moved over there. And that was a tremendous help because they could wait until we had passed, the whole bomber stream had passed, take off, climb on course and catch us. And take us almost all the way to the target, unless it was real deep. They could take us to Berlin, which was a pretty, pretty deep target, and I went there a couple of times, and they took us all the way to Berlin.

And that made a tremendous difference. That really cut down on the fighters. The Luftwaffe was having problems with fuel for their fighters and just having enough available and crews and what not. And then with our fighters flying escort, we were pretty well protected from fighters. But the flak just got worse and worse and worse as time went on.

How would you describe flak?

Ellis: Sit on a bomb with a fuse burning and wondering if its gonna go off before you got off of it. That's the way I felt about it. You just didn't know. You'd see it all around you, was the next one gonna be right underneath you or right through you?

What did it sound like?

Ellis: Sounded like somebody shooting a machine gun at your airplane. Just a lot of banging with, you know, the shrapnel. If the thing went off, you know, inside your airplane, well you never knew it but, but if it exploded above you or below you, you got a lot of shrapnel hitting the airplane. And you could sure hear that stuff. Maybe like hail falling on a tin roof or something like that.

Was there every anyone in your crew that had been wounded?

Ellis: I don't, I don't think so. Like I say, we were very, very lucky.

What was your opinion when you heard about Hiroshima?

Ellis: Thank God.

You were accustomed to taking 1,000 bombers to take out a target; now it took just one aircraft with an atomic bomb.

Ellis: Well I'll tell you where I was when that, that happened. I had finished the tour in England. I was back in the states. I had my leave and I was back at Ellington Field in Texas training for B-29s and I did not want to go to the Pacific. I didn't wanna be career military. I wanted to get out and I wanted to, you know, resume normal life, I suppose. And I did not wanna go to the Pacific and I just said, "Thank God." That's how I felt about it. As terrible as it was, war was terrible. War was hell, and that's the way it was.

Talk about the importance of the lead crew flying steady.

Ellis: The effort and the cost of getting that formation to the target was enormous. And if we failed in our job of dropping the bombs, you know, and doing what we were sent out there to do, it simply meant somebody else had to come back tomorrow and go through all of this again.

So, we were highly motivated, all of us, to do the very best that we could. The bombardier had a tough job. We had, I think, one of the best bombardiers in the group, but there were a lot of good bombardiers. There truly were. But they had to be able to see the target in time to set up on it and get everything set just right so he could drop the bombs at the right place.

That meant that you needed to have our lead airplane pointed so that the bombardier would have the best chance of seeing the target as early as possible and that when it came to dropping the bomb itself that our flights, that everybody's airplane was stabilized. You know, there weren't people...if you had a wingman that was doing this when he dropped, dropped the bomb he's gonna toss his bomb load to the side. If, you know, whichever way he, he was going. So it was extremely important to get everybody settled down and stabilized as steady as you could going in so that you had the very best chance.

And I'm, I'm sure you know that in those days everybody dropped on the lead, so if the lead didn't do a good job the whole group didn't do a good job, because they would drop their bombs when they saw the first bomb come out of the bomb bay of the lead airplane. So it was awfully important that we got that right.

And part of that was, you know, getting it so that the bombardier could see the target as early as possible. Hopefully the weather would be a hole in the clouds or that he'd be able to see it and to be lined up as well as we possibly could right on course so we weren't, you know, crabbing into it or something like that. So the big job was to get the whole formation lined up so that they had the best chance of putting the most bombs on the target.

Did you ever go to Ploesty?

Ellis: There were many missions to Ploesty and the first one was the one that, you know, has had a lot of coverage. It was navigation error that screwed that one up because the lead plane got shot down and they were at low altitude and boy, I'll tell you, navigating low altitude over the desert is a very difficult thing to do at best. They lost a lead airplane, lost a lead navigator and the navigator that...or the plane that took their place made a wrong turn and they overshot the target and they alerted, in the process, the Germans and all hell broke loose.

Anything else?

Ellis: The B-17 was a good airplane. It was a rugged airplane. It was a very honest airplane. It wasn't, spec wise, you know, a super duper performer, but it sure did, you know, it did the job for us. I think one of the things that you see here at this reunion, and it's going on 60 years, is the bonding between these guys. I love these guys. There're a lot of characters. My pilot was a character. I love him, love him to death.

Would you explain the drift meter again, please?

Ellis: With dead reckoning you have to know the heading of the aircraft and you can read that off of the compass in the aircraft. You knew what your heading was. But you couldn't figure out what your ground speed was and you couldn't figure out what your ground track, you know, the line you were making over the earth, unless you knew what the winds were, because you needed to know where the winds blowing you to the side and where...how...were they affecting speed – 'cause if it was a head wind slowing you down, and the opposite for a tail wind.

And we used this drift meter. We'd line up on something on the ground and run it down an etched line in the viewing screen on the thing and you'd track that down there and it'd adjust the drift meter and then once you'd done that you could look on the compass scale on the outside and you could figure out what your drift angle was. You were drifting to the right five degrees or 10 degrees or to the left, and with that you could compute your ground direction and your ground speed.

How you did that, we had a computer. It's called an E6B computer and it wasn't electronic. And on the backside of it was a circular slide rule, just like slide rules that we used to use in school, you know, in math and physics and stuff like that, but it was circular instead of being linear. And you could compute your time and your distance and your speeds and whatnot with that on one side (of the computer).

On the flipside of the thing was a graphing capability and you could put your air speed and your heading (on it based on what) you could read off the instruments in the airplane and then once you got the drift you could put the drift angle in there and draw a line and with that you could then figure what your track was on the ground, you know, in the compass degrees and you could also figure out your ground speed with that. And it was cumbersome, but it would do the job. It just took a while to do it. Would have been nice to have had, you know, a handheld computer, but they didn't exist in those days.

When you dropped bombs, did you have to have the nose dead on center?

Ellis: No. You could hit it at an angle because the bombsite was gyro stabilized to begin with. It had the capability of cranking the optics around to whatever your drift angle was and yeah, you could be crabbing and I think, I wasn't a bombardier, so I don't know this, I think it added a little bit of error, was some potential error. It was best if you were straight on, but you could drop them at an angle if you had to, and very often you had to do it because the winds didn't cooperate, you know.

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