



This Boeing Flying Fortress PB-1G, Bureau Number 77254, served, fourteen years with the Coast Guard as a special photo plane. The C-130B in the background accepted January 12, 1960 and marked the first use of turbine propulsion in U. S. Coast Guard aviation. (Photo - United States Coast Guard)

# The Boeing PB-1

By MAJOR ROBERT C. MIKESH, USAF

As World War II was drawing to a close, the Boeing B-17 Flying Fortress--often referred to as the symbol of American air power--was fast becoming a surplus and obsolete war machine. Many late war, and post war uses befell the B-17, but perhaps the most significant new use for this aircraft was that in which it served the U. S. Navy and Coast Guard.

In 1945, a few B-17s were being used by the Navy as flying test beds for various projects. They initially retained their Army Air Force designations, since only limited use of this type was anticipated.

At the close of the war, great strides were being made in submarine detecting radar by the U. S. Navy. The B-17 was capable of filling the immediate need for a long range, land based aircraft to carry this bulky equipment. Consequently, more Flying Fortresses were acquired from the AAF and were refitted for anti submarine and weather reconnaissance work. These aircraft were from a pool of B-17s already accepted from the Boeing Wichita factory by AMC (Air Materiel Command). The selection of consecutively serialized aircraft for the Navy seemed of little importance, and the majority of remaining B-17s from these production blocks were

assigned to Altus Field, Oklahoma, for use in heavy bombardment crew training.

The designation of PB-1 was assigned to Navy B-17s as of 31 July 1945. B-17s that were already in Navy service for various tasks were then so designated. (It will be noted that this was the second time that the designation "PB-1" was used. First use was by the one prototype Boeing biplane flying boat in 1925, which did not reach production. ) For the radar carrying B-17 "type, the "W" suffix was added which indicated the "early warning" mission.

Initial conversions (and presumably all that followed) of the B-17s to PB-1W configuration was accomplished at N.A.M.U. Johnsville, Penna. By 1 April 1946, the first four of this type had been delivered to VPB-101 for service. Deliveries were retarded due to delays in receiving the APS-20 radar for aircraft installation. The Navy modified Fortress was easily identified by the oversized radome; most unusual for aircraft at that time.

The AAF was having notable success with the lifeboat carrying B-17H, for air-sea rescue operations. A requirement existed in the Coast Guard for a similar type aircraft, not only for air-sea rescue, but also for

long range, iceberg reconnaissance flights. Since the Coast Guard was still part of the Navy during this time period, more B-17s were reworked by the Navy for this Coast Guard mission. These were designated PB-1G. The exact number actually assigned to the CG is questionable as official sources vary from 15 to 18. Sometime after the CG reverted to the Treasury Department again, (January 1, 1946) four PB-1Cs were turned back to the Navy, and one went to the Army for unknown reasons.

#### END OF AN ERA

The last of the military operated Flying Fortresses with a military crew, made its final landing on October 14, 1959. This was a PB-1G, 77254, which terminated a long career for its type at CGAS Elizabeth City, North Carolina. (Crewless QB-17s were used as target drones in the USAF, the last of which was shot down in 1960.)

Coast Guard 77254 has a history apart from others of its type. Reporting aboard with only 52.5 flying hours, the CG converted this aircraft to a photo plane. The armament was removed, the bomb bays sealed off and loaded with oxygen bottles, and a massive hole cut in the aft belly to handle a special Coast and Geodetic Survey, nine-lens aerial mapping camera, costing one and one-half million dollars. Special film, 23 inches wide was used, at a price of \$14.00 per picture. The Norden Mark 2 bomb sight was the only combat related equipment that remained and was used for pinpointing targets for the camera. With the nine lens camera, 77254 could photograph 313 square miles of territory with one click of the shutter while flying at 21,780 feet. For twelve years, it ranged from Puerto Rico to Alaska, recording the face of the United States for the Hydrographic Office. For its special work, this CG aircraft and crew, which was based at Elizabeth City, was assigned to the Coastal and Geodetic Survey task for seven to eight months out of the year.

The B-17 type was ideally suited to the new mission of photo mapping due to its inherent stability which was necessary for a camera platform. The good climb capability was important, for much of its work was done at twenty to thirty thousand feet.

The dismantling of Coast Guard 77254 Flying Fortress, closed an important era of aviation which produced one of the most widely discussed aircraft of all times.

#### BOEING B-17G/PB-1 SERIAL & BuNo LISTING

The transfer of aircraft from one branch of military service to another, often causes the loss of their original identity. This was the case with most of the B-17/PB-1 conversions. By comparing AAF Individual Aircraft Record Cards of B-17s with Naval Aircraft Record Cards of PB-1s, Bureau numbers were matched with the respective AF serial numbers. Coast Guard records further confirmed some of these findings. Despite the official records, several irregularities persist and some questions remain unanswered.

|       |       |          |               |                                         |
|-------|-------|----------|---------------|-----------------------------------------|
| PB-1W | 34106 | 42-3521  | B-17F 75DL    | (To B-17G conf'g. before reassigned.)   |
| PB-1W | 34114 | 44-83538 | B-17G 85DL    | (Delv. to Phila. 12/45. Stricken 7/56.) |
| PB-1W | 77137 | Unknown  | B-17G --      | (Stricken 1948) (T)                     |
|       | 77138 | Unknown  | "             | (FAA Reg. N5225V)                       |
| <hr/> |       |          |               |                                         |
|       |       |          | Delv. to Navy |                                         |
| PB-1W | 77225 | 44-83855 | B-17G 95DT    | (7/14/45)                               |
|       | 77226 | 44-83857 |               | (7/14/45)                               |
|       | 77227 | 44-83858 |               | (7/15/45) (N5226V)                      |
|       | 77228 | 44-83859 |               | (7/14/45) (N5228V)                      |
|       | 77229 | 44-83861 |               | 7/14/45) (N5227V)                       |
|       | 77230 | 44-83862 |               | (7/14/45)                               |

|       |       |          |             |                    |
|-------|-------|----------|-------------|--------------------|
| PB-1W | 77231 | 44-83863 | B-17G 95 DL | (7/16/45) (N5233V) |
|       | 77232 | 44-83864 |             | (7/14/45)          |
|       | 77233 | 44-83868 | "           | (7/14/45) (N5137V) |
|       | 77234 | 44-83869 |             | (7/16/45)          |
|       | 77235 | 44-83872 |             | (7/16/45)          |
|       | 77236 | 44-83873 |             | (7/12/45)          |
|       | 77237 | 44-83874 | "           | (7/16/45)          |
|       | 77238 | 44-83875 | "           | (7/16/45)          |
|       | 77239 | 44-83876 | "           | (7/14/45)          |
|       | 77240 | 44-83877 | "[2]        | (7/16/45) (N5232V) |
|       | 77241 | 44-83878 | "           | (7/26/45)          |
|       | 77242 | 44-83879 |             | (7/18/45)          |
|       | 77243 | 44-83883 |             | (7/18/45) (N5229V) |

#### To USCG

|       |       |          |                                         |                    |
|-------|-------|----------|-----------------------------------------|--------------------|
| PB-1G | 77245 | 44-83885 | B-17G 95DL                              |                    |
|       | 77246 | 44-85812 | B-17G HOVE                              | (4/17/45)          |
|       | 77247 | 44-85821 | "                                       | (4/ 1/45) (7/6/45) |
|       | 77248 | 44-85822 |                                         | (4/17/45)          |
|       | 77249 | 44-85823 |                                         | (3/28/45)          |
|       | 77250 | 44-85824 | "                                       | (3/28/45) (N8055E) |
|       | 77251 | 44-85825 | "                                       | (7/11/45)          |
|       | 77252 | 44-85826 | ft                                      |                    |
|       | 77253 | 44-85827 | "                                       |                    |
|       | 77254 | 44-85828 | "                                       | (8/14/45)          |
|       | 77255 | 44-85829 | "                                       | (7/27/45)          |
|       | 77256 | 44-85830 |                                         |                    |
|       | 77257 | 44-85831 |                                         | (4/17/45)          |
|       |       | 44-85832 |                                         |                    |
| PB-1W | 77258 | 44-85683 | B-17G 100VE                             | (7/10/45)          |
| PB-1G | 82855 | 44-85837 | B-17G HOVE                              |                    |
|       | 82856 | 44-85834 | "                                       |                    |
|       | 82857 | 44-85838 |                                         |                    |
| PB-1W | 83992 |          | (Assigned Oct. '46; stricken Jan. '55.) |                    |
|       | 83993 |          | (The Naval Aircraft Record Cards for    |                    |
|       | 83994 |          | these 6 a/c showed they were recd.      |                    |
|       | 83995 |          | 5/27 and stricken 8/31/47 at Corpus     |                    |
|       | 83996 |          | Christi. No further info. or ident.     |                    |
|       | 83997 |          | is given. Probably before B-17G 95VE    |                    |
|       | 83998 |          | block. Perhaps not converted.)          |                    |

PB-1 83999 thru 84027 were cancelled numbers as aircraft were not delivered.

RB-17G 44-85661 was assigned to Navy 5/18/50 per AF a/c Record Card. Navy has no record of this aircraft.

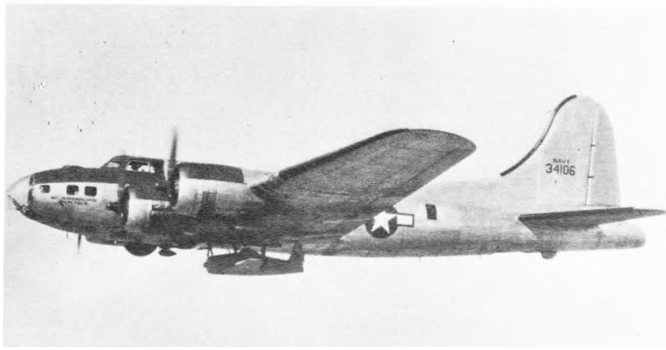
#### BOEING PB-1G's IN U.S. COAST GUARD SERVICE

| Location and inventory as of 30 June 1953 |                                         |
|-------------------------------------------|-----------------------------------------|
| PB-1G 77245                               | Elizabeth City CGAS, N.C. for overhaul. |
| 77246                                     | Elizabeth City CGAS, N.C.               |
| 77247                                     | Elizabeth City CGAS, N. C.              |
| 77249                                     | Argentia, Newfoundland.                 |
| 77250                                     | Argentia, Newfoundland.                 |
| 77251                                     | Annette Isle, Ketchikan, Alaska.        |
| 77253                                     | Port Angeles CGAS, Wash.                |
| 77254                                     | Elizabeth City CGAS, N.C.               |
| 77255                                     | San Francisco CGAS, Calif.              |
| 77256                                     | Elizabeth City CGAS, N. C. for overhaul |
| 82855                                     | San Francisco CGAS, Calif.              |

#### FOOTNOTES:

- [1] These were the last 2 numbers originally assigned to canx. PB4Y-2s; BuNo's; 76839 thru 77138.
- [2] One of 3 B-17 types used in movie: THE WAR LOVERS.
- [3] Ibid.
- [4] Later FAA registration: N4711C.
- [5] AAF & Navy records show direct transfer to Coast Guard. No record with USCG of this aircraft.

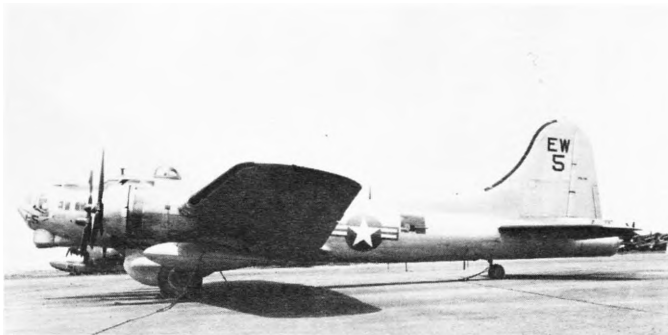
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Presumably the first B-17 type in Navy service, 34106 was assigned to N.A.M.C. Philadelphia and was used as a flying test bed. Here it carries a heavily weighted F8F model for drop tests. (Photo - Boeing)



After being retired by the Navy around 1948, 77138 (and 77227) was purchased at Litchfield Park, Arizona, Naval Aircraft Storage Center, by the American Turbine Engine Co. of Long Beach, Calif. (Photo - Derek Mau)



Bureau Number 77232, a PB-1W, was photographed at Naval Air Station, Norfolk, Virginia, about 1950. Radar gear is below center fuselage and the aircraft is equipped with external wing tanks. (Photo - Roger Besecker)



Bureau Number 77234 is seen in September 1950 with a later development in the PB-1W series, overhead carriage of the radome which proved more efficient. Few PB-1Ws were modified. (Photo - Hal Andrews)



Typical of most PB-1W configurations was Bureau Number 77237 which is seen here while assigned to VX-4 at NAS Patuxent River, Maryland. (Photo - Boeing)



77254 was specially equipped with nine lens camera (at lower rear of fuselage) and was used by the Coastal and Geodetic Survey for aerial mapping. (Photo - Boeing)



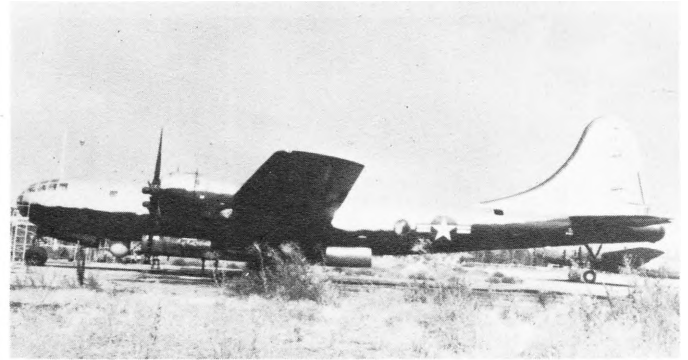
This PB-16, 77255, was equipped for Ice Observation duty on International Ice Patrol and is seen awaiting take off from Argentia, Newfoundland. (Photo - USCG)



83992 was listed XPB-1 when used by Cornell Aeronautical Laboratory as a test vehicle. Note Westinghouse J-30 jet engine below bomb bay. (Photo - Cornell AL)



The P2B-1S, 84029, was modified to carry the Douglas D-558 research aircraft aloft to be air launched for rocket-powered flight. (Photo - Boeing)



The black undersurfaces of P2B-2S, 84031, were probably applied by the Army prior to transfer to the Navy for its anti-submarine project. (Photo - Hal Andrews)

#### ADDENDA: BOEING P2B "SUPERFORTRESS"

In 1947, four B-29s were transferred from the Army to the Navy. As P2Bs they served BuAer engineers for their "anti-submarine" project, and consequently acquired the "S" suffix to designate this mission. Service life was limited for this type, but most notable assignment was that of "Mother Ship" for carrying research

aircraft aloft for air launching.

#### BOEING B-29/P2B SERIAL & BuNo LISTING

|        |       |          |      |      |                   |
|--------|-------|----------|------|------|-------------------|
| P2B-1S | 84028 | 45-21789 | B-29 | 95BW | (To Navy 4/14/47) |
| P2B-1S | 84029 | 45-21787 | B-29 | 95BW | " "               |
| P2B-2S | 84030 | 45-21791 | B-29 | 95BW | " " "             |
| P2B-2S | 84031 | 44-87766 | B-29 | 90BW | " " "             |

## A Moment of Pride

In a world that has become more and more dedicated to materialism, and all its evils, it is a great experience to see in action the principles of mutual cooperation and devotion to assisting others without thought of self gain, ideals which inspired and gave birth to the United States. Where today most people are driven by two desires, to sate their senses and to strive only for material gain, it is a measure of the surviving good in man, and his hope for the future, that can be seen in the A.A.H.S. and some of its work. A prime example is the coverage of the Douglas high wing observation airplanes that appeared in the Fall and Winter 1963 JOURNAL. On this project, many people devoted a great deal of time and energy, without thought of reward, to help others build a worthy study for all to share and enjoy. It was a series of acts that make a people, or a society, great, and leaves them with a beautiful and lasting way of life.

The Douglas high wing project began simply when one of our Members, Ray Pritchard, offered some rare photos of these planes to the JOURNAL--photos from his own collection that had never been published. Where one person has such photos, others would surely have additional shots, so a number of Members were asked if they would help develop a full photo study of this type of plane. Each of them quickly responded with all the help they could give. Bill Larkins had some shots of his own and some from other photographers which he had been collecting for a book he was planning to write. He made them all available to the JOURNAL. Pete Bowers dug deep into his photo files and made several key pictures available. Bob Cavanagh sent us all the photos he had of these planes. And Harry Gann made available photographs he had assiduously collected over the years.

Photos, however, cannot always tell a full story, and it was at this point that Walt Jefferies offered to further this study by doing a series of detailed, air brush drawings of the Douglas high wings. His own, remarkable files held much information, but to do drawings of the quality intended, required a tremendous

amount of material. So a request was made of the Air Force Museum, Wright-Patterson Air Force Base, Ohio, and personnel of that organization immediately went into its considerable files to check out for us a number of vexing points. In time the answers were found and forwarded to the JOURNAL. Thanks to the Air Force Museum, we were able to clear up (for the first time) the errors surrounding the alleged Y10-31Cs, and Walt had all the material needed to do his detailed drawings.

Besides external details, such drawings require a wealth of information on the internal structure of the aircraft, and it was the manufacturer, Douglas Aircraft, who came to the rescue. Their records on the high wing type, and some blueprints, were made available to the JOURNAL so that the drawings could be done with the highest degree of accuracy.

In all, over a dozen people spent some 500 hours working toward a common goal to tell one wonderful story. As the new Editor, I had the privilege of watching all this take place, and it has left me with a feeling of great pride in our Society and in the ideals which motivate its Members.

The Douglas high wing project, however, need not end here, and in fact it won't. All of the story has still not been recorded. Since it went into print, new material has come to light, adding more to the story. If you have a photo or some bit of material, no matter how small, you could loan to the Society, then all of this story will come to light in the new future and there will be additional drawings and photos to fill out the story.

There will also be further studies of this type in upcoming issues of the JOURNAL. And if you have any information or photos on the types to be studied, I'd like to ask you to let me know about it so that we can make use of the greatest base of material in our studies of the Curtiss A-8 and A-12 (scheduled for Summer-1964), the Keystone bombers, the DeHavilland DH-4s, the Boeing P-26s, and the Seversky P-35s.

Kenn C. Rust, Editor