

THE GERMAN FLAK SHIPS

PART I: THE GERMAN AND EX-NORWEGIAN HULLS

Aidan Dodson and **Dirk Nottelmann** outline the history of the first four of eight planned state-of-the-art anti-aircraft batteries converted from turn-of-the-century German and ex-enemy vessels by the *Kriegsmarine* during the Second World War. The remaining vessels are scheduled to be covered in next year's edition.

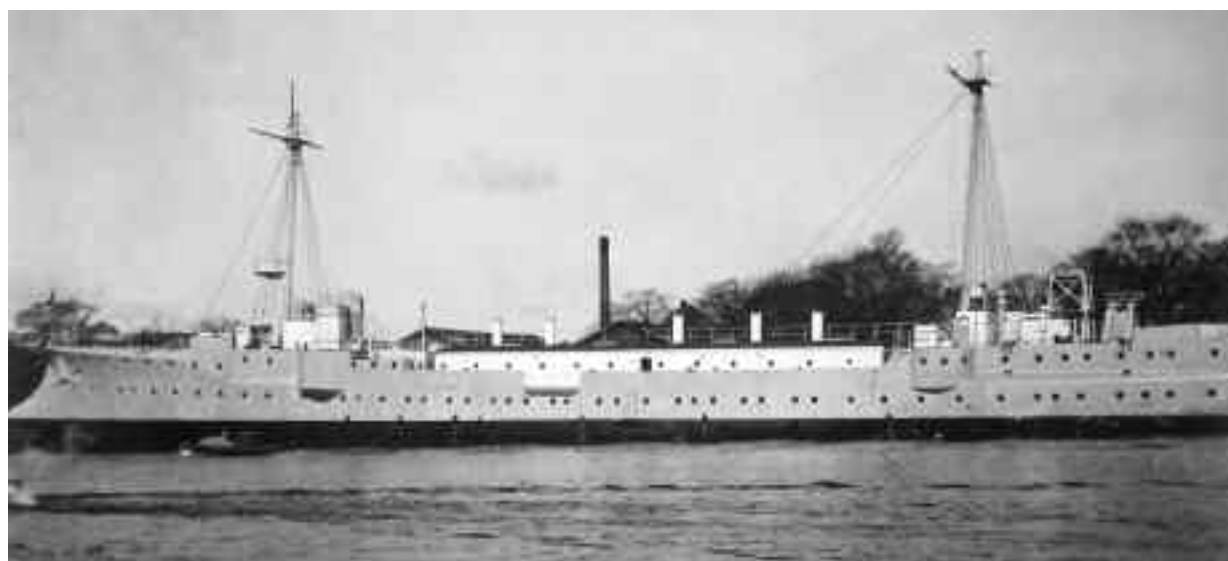
One of the many ways in which the Second World War differed from the First was in the significantly increased threat from the air. At sea, this was recognised in a number of navies by building or converting ships whose primary armament was directed skywards. Britain's Royal Navy had begun a programme of converting First World War-vintage light cruisers into ocean-going fleet and convoy escorts equipped with the latest AA weaponry and fire control systems. Such equipment was likewise installed by the German Navy in old hulls of similar size, but in this case primarily for the purpose of defending harbours from air attack from seaward rather than other ships at sea. As a result, self-propulsion was a secondary requirement, and of the eight such vessels projected only three were actually able to move under their own power, and then at a rather sedate pace.

In the Beginning

As early as 4 September 1939 the port of Wilhelmshaven, and the important fleet anchorage of the Schillig Roads

in the Jade Estuary that lay between it and the North Sea, had been subject to air attack by bombers of the Royal Air Force; countless more would follow before the end of the war. From the outset, the lack of seaward anti-aircraft defence for Wilhelmshaven, especially from the northeast and southeast, was recognised. In particular there were certain bearings which were difficult to cover by land-based heavy anti-aircraft (Flak) weapons, even when firing at the limits of their effective range.

To close these gaps, several proposals for floating batteries were discussed, each with particular reference to guns for both long-range and close-in defence. There



Arcona (above) moored at Swinemünde in 1938 and *Medusa* (below), at an unknown date, at Wilhelmshaven. Both hulls had been kept in good shape externally. (Dirk Nottelmann/Heidrich collection)

were also wider issues of the most effective positioning of the batteries, as well as how they should be integrated into the overall air defence network.¹

One problem was the paucity of suitable hulls and, with few alternatives available, the Navy decided on the former small cruisers *Arcona* and *Medusa*, currently in use as accommodation hulks at Wilhelmshaven and Kiel.² Both were well suited to this conversion, as they had retained all of their structural strength-points for mounting medium-calibre guns, as well as magazines and ammunition hoists. While the ships retained their machinery, this had not been used since the 1920s (*Medusa* having even had her funnels removed – see photograph); this was not to be reconditioned, as it was deemed unnecessary for their intended harbour defence role.

Medusa had been launched in December 1900 as one of the third group of the *Gazelle* class, the first of the classic general-purpose small cruisers built by the German Navy up to the end of the First World War.³ *Arcona* had entered the water in April 1902 as a unit of the follow-on *Frauenlob* class, and had been converted to a minelaying cruiser in 1912, serving as guardship in the Ems estuary throughout the First World War. She had remained in commission after the war as a minesweeper support ship and, following a refit, had served with the newly-established *Reichsmarine*⁴ until paid off in December 1923. In contrast, *Medusa* had been laid up from 1908 to 1914, returning briefly to active service for second-line duties from 1914 to December 1916, when she became a training/accommodation ship at the principal naval school of Flensburg-Mürwik.

Medusa was subsequently recommissioned in July 1920 as the first major warship of the *Reichsmarine*, serving until September 1924. Although a major modernisation was briefly considered to allow her a

further period of service, *Medusa* was never recommissioned; she was stricken in March 1929 in anticipation of the commissioning of her ‘legal’ replacement, *Karlsruhe* in November. Likewise, *Arcona*, which had served from 1921 to 1923, was stricken on 15 January 1930, the day her replacement *Köln* was commissioned. *Arcona* and *Medusa* were, however, retained as accommodation hulks. The former remained externally largely intact (save for the loss of her mainmast) while serving successively at Wilhelmshaven, Swinemünde and Kiel, but *Medusa*, which was used to accommodate the crews of destroyers and torpedo boats at Wilhelmshaven from 1927, was later stripped down to just her masts.

Arcona

Having been selected for conversion on 12 April 1940, *Arcona* was taken in hand at the Deutsche Werke at Kiel two days later, work being completed on 23 May. Her initial modifications were quite simple. The foremast was removed and the forefunnel was cut down to form the support for a 110cm searchlight; the second funnel was retained as an uptake for the remaining (after) group of boilers, which provided heating as well as steam for electrical power generation. Her outfit of guns would vary significantly over the coming years, with the full details not necessarily reflected in published sources. Other modifications would also be made (see below), with the vessel wearing various camouflage paint schemes during her Second World War career.

Four 10.5cm/45 HA mountings were initially fitted in the locations formerly occupied by the original main guns on the forecastle and poop. These required the addition of large sponsons protruding over the sides to provide sufficient space for the gun crews for all-round firing. For close-in defence the main battery was supported by single



Arcona in the spring of 1940, fresh from her reconstruction. She is wearing the first of her many different camouflage schemes (see below). Note the guardrail-lined sponsons for the 10.5cm guns, which would soon be closed by bulwarks. (Dirk Nottelmann collection)

3.7cm semi-automatic guns superimposed fore and aft, and six single 2cm guns forward, amidships and aft. A lattice-supported platform for a second searchlight was

installed atop the engine casing, while fire control directors with 3-metre rangefinders were fitted fore and aft.

Arcona was rapidly brought into service, being

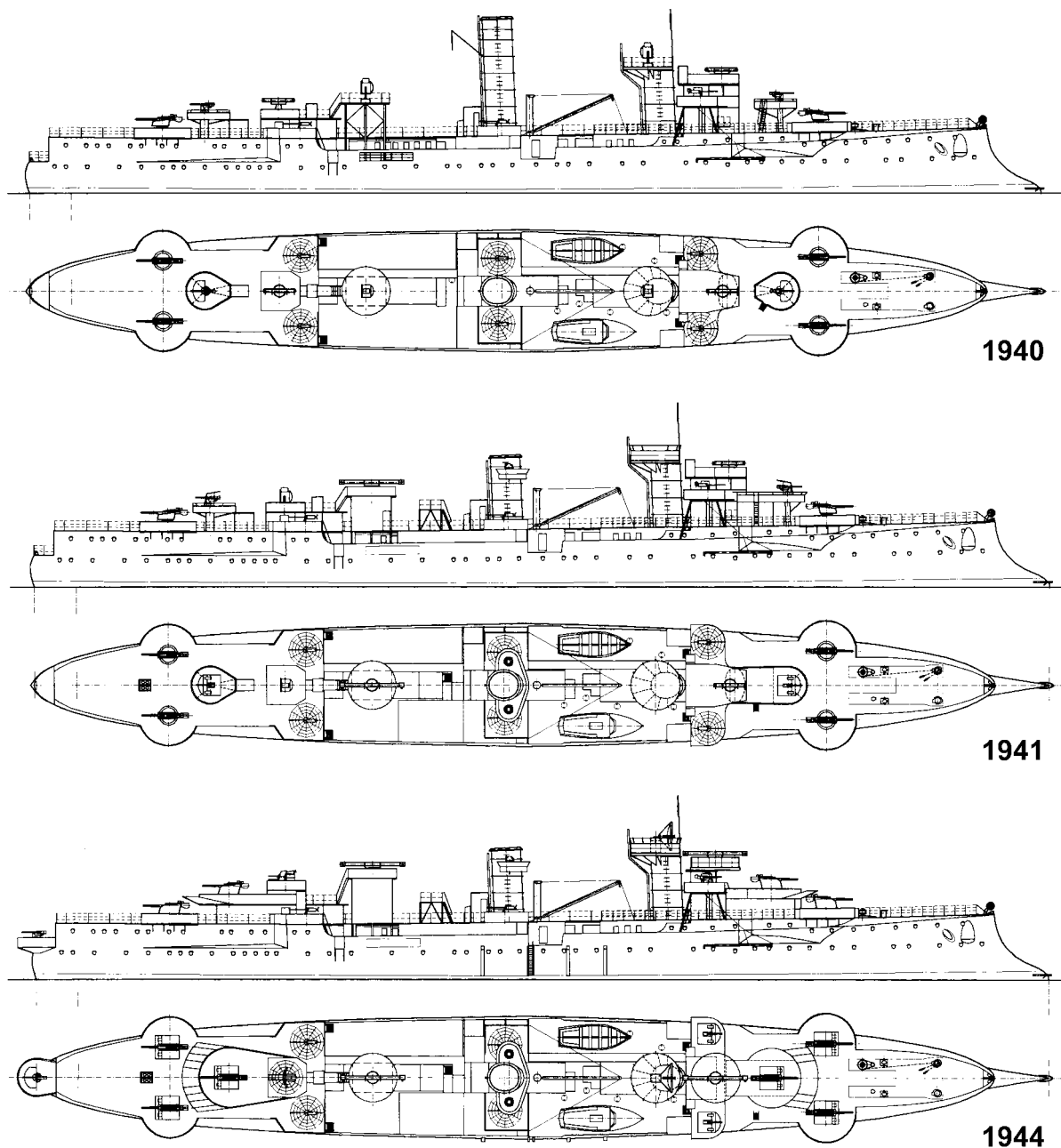


A set of images taken on board *Arcona* during 1940. Clockwise from the top right: view forward along the starboard side, with one of the 2cm AA guns in the foreground; crew members gather informally around the empty cradle for the motor launch; view from the quarterdeck towards the searchlight atop the former forefunnel; view from the bridge onto the forecastle, showing the remaining portside anchor cable. In this last image the strong current of the Jade is evidenced by the 'bow wave' of the mooring buoy. (Dirk Nottelmann collection)

anchored in the Schillig Roads some 19 kilometres north of the dockyard and linked to the wider local anti-aircraft network via a telephone buoy. From here she scored her first success against an enemy aircraft on the night of 20/21 July 1940. Initially she was moored in 13 metres of water, but concerns regarding her vulnerability to airborne torpedoes meant that her anchorage was later

moved 1.5 kilometres to the northeast into shallower (7-metre) water, the ship being declared operational in her new location on 27 December 1940.

On 7 January 1941, however, *Arcona* had to be temporarily withdrawn into the inner port of Wilhelmshaven due to strong icing within the Jade estuary. In the summer of 1941 she underwent a first



Arcona 1940–44

As rebuilt, *Arcona* retained a single bower anchor (to port), unlike *Medusa*. After her first major refit in 1941, the most obvious change is the cutting-down of her second funnel, but other important changes include the 6-metre rangefinder aft and the fitting of splinter shields around the 37mm guns. In her final configuration in 1944, *Arcona* carries her final complement of guns, including one on the stern platform; both directors are fitted with 6-metre rangefinders, and there is a *Würzburg* radar antenna atop her former forward funnel. (Drawn by Dirk Nottelmann)



Arcona following her 1941 refit. (Aidan Dodson collection)

refit, during which the second funnel was shortened and fitted with a platform for two 90cm searchlights. A new fire control director with a 6-metre rangefinder was fitted aft, exchanging positions with the after searchlight. She would return to her former position at the end of August, but was again withdrawn into the inner port in January 1942 due to icing in the Jade. While in the dockyard in mid-February awaiting the March thaw, she and *Medusa* were put on high alert, owing to the presence of the battleship *Scharnhorst* in the dockyard for initial repairs following the 'Channel Dash'. *Arcona* left the dockyard on 17 March but, due to the continuing harsh winter, had to remain within the port for almost a further two months, albeit fully operational.

When she returned to Schillig Roads on 7 May, her berth was shifted 4.2 kilometres upstream. Towards the end of the year a further refit was carried out when a FuMG 39 TD (*Würzburg*) radar was installed. This was standard equipment for the Air Force and Army, and reflected the ship's integration into the shore-based air defences of Wilhelmshaven. It was fitted in the place

formerly occupied by the searchlight (removed in anticipation in 1941) atop the former forefunnel; the radar became operational as of 1 November. Additionally, a fifth 10.5cm gun was added aft, and all mounts were now protected by splinter shields; the 3.7cm gun displaced by the new 10.5cm weapon was relocated to the former minelaying platform at the stern.

Having temporarily replaced *Medusa* on the south side of Wilhelmshaven during her half-sister's summer-1943 refit (see below), *Arcona* was once more refitted during the winter of 1943/44 to her final configuration. She received a sixth 10.5cm gun forward, supported by the replacement of the former 3-metre director atop the bridge with one equipped with a 6-metre rangefinder; a quadruple 2cm mounting (*Vierling*) was fitted aft in place of a single mount of that calibre that had replaced the after searchlight in 1943 (see camouflage graphic). On 22 July 1944 she moved permanently from her customary location at Wilhelmshaven North, being towed around to the Elbe estuary in front of the Kiel Canal locks at Brunsbüttel. Here she relieved *Ariadne* (see below) in



Medusa during the second half of 1941 after her first minor conversion, which included the mounting of splinter shields on the 3.7cm guns and the partial enclosure of the searchlight platforms. (Dirk Nottelmann collection)

German Flak Ships: Characteristics & Building Data

Arcona

Displacement:	2,657 tonnes
Dimensions:	104.4m (wl), 105.0m (oa) x 12.3m x 5m
Machinery:	Inoperative
Armament:	1940/42 – Four 10.5cm/45, two 3.7cm, six 2cm AA. 1943 – Five 10.5cm/45, four 3.7cm, five 2cm AA. 1944 – Six 10.5cm/45, three 3.7cm, eight 2cm (1 x IV, 4 x I) AA
Fire control:	1940 – Two directors (2 x 3m rangefinders) 1941/42 – Two directors (1 x 3m, 1 x 6m rangefinders) 1943 – Two directors (1 x 3m, 1 x 6m rangefinders) 1944 – Two directors (2 x 6m rangefinders)
Radar:	1944 – One FuMG 39 TD (<i>Würzburg</i>)

Medusa

Displacement:	2,650 tonnes
Dimensions:	104.1m (wl), 105.1m (oa) x 11.8m x 5m
Machinery:	Inoperative
Armament:	1940/41 – Four 10.5cm/45, two 3.7cm, four 2cm AA. 1942/43 – Four 10.5cm/45, two 3.7cm, six 2cm (2 x II, 2 x I) AA. 1943/44 – Six 10.5cm/45, two 3.7cm, four 2cm AA. 1944 – Six 10.5cm/45, two 3.7cm, eight 2cm (1 x IV, 4 x I) AA
Fire control:	1940 – Two directors (2 x 3m rangefinders) 1943 – Two directors (2 x 6m rangefinders)
Radar:	1943 – One FuMG 39 TD (<i>Würzburg</i>)

Nymphe & Thetis

Displacement:	3,858 tonnes
Dimensions:	85.3m (pp), 92.7m (oa) x 14.8m x 5.4m
Machinery:	Three cylindrical boilers (two double-, one single-ended); 2-shaft VTE; 4,500ihp = 14 knots
Armament:	Six 10.5cm/45, two 4cm, six 2cm AA
Fire control:	Two directors (2 x 3m rangefinders)
Radar:	[<i>Nymphe</i> 1945: one FuMG 39 TD (<i>Würzburg</i>)?]

Building Data

Name	Built	Launched	Converted	Recomm
<i>Arcona</i>	AG Weser,	22 Apr 1902	Deutsche Werke,	25 May 1940
		Bremen	Kiel	
<i>Medusa</i>	AG Weser,	05 Dec 1900	Rickmers,	Aug 1940
		Bremen	Wesermünde	
<i>Nymphe</i>	Armstrong,	18 Mar 1897	Kaldnes mekaniske verksted,	01 Feb 1941
	(ex- <i>Tordenskjold</i>)	Tyneside	Tønsberg	
<i>Thetis</i>	Armstrong,	04 Jan 1897	Kaldnes mekaniske verksted,	01 Feb 1941
	(ex- <i>Harald</i>	Tyneside	Tønsberg	
	<i>Haarfagre</i>)			

protecting the canal against attacks from seaward. Contrary to reports that she was scuttled in the II. Entrance at Wilhelmshaven on 3 May 1945, she was still there at the German surrender. Sometime during the six weeks that followed, she was towed to Wilhelmshaven and the crew discharged. It was believed she had shot down nineteen Allied aircraft during the war.

Medusa

Owing to a lack of dockyard capacity, *Medusa*'s rebuild was carried out by Rickmers at Wesermünde, from May to August 1940. Although the conversion was on the

same lines as that of *Arcona*, as essentially a bare hull before conversion *Medusa* looked rather different. She had a slim new funnel and a mast supporting a derrick amidships, and lattice-supported platforms fore and aft each supporting a searchlight. As with *Arcona*, her armament evolved over the coming years (see above table).

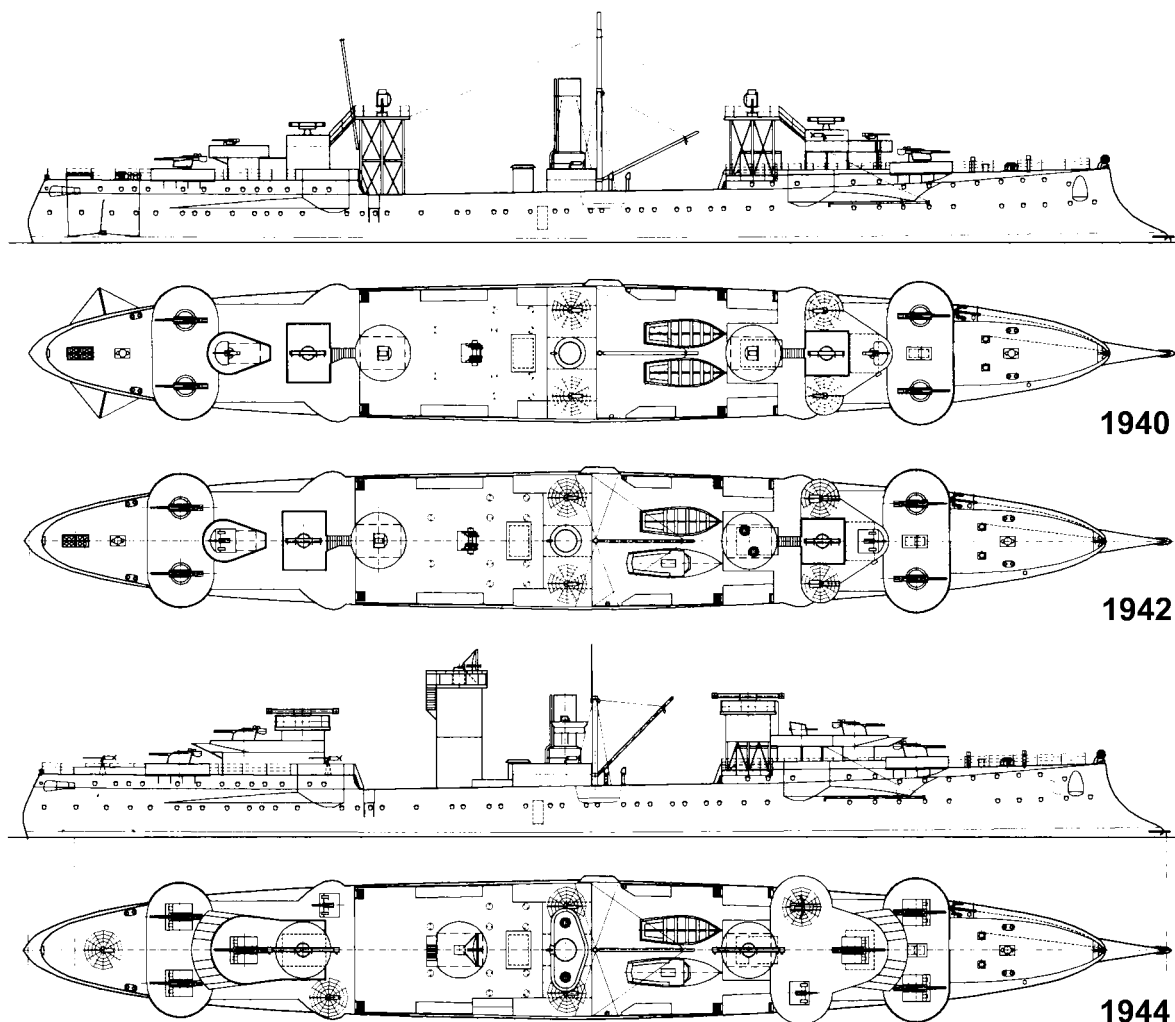
On 13 August 1940, *Medusa* was towed out of Wesermünde and, on arrival at Wilhelmshaven, anchored in the Vareler Deep of Jade Bay, in a location six kilometres southeast of the dockyard. Connected like *Arcona* to the air defence network by a telephone buoy, *Medusa* was declared ready for action on the 22nd as part of *Marine-Flak-Abteilung* (Naval Anti-aircraft Division)

222, responsible for the defence of the southern side of the dockyard.

In July 1941 her gun barrels were replaced, and in October the ship underwent a refit that lasted a month. As with *Arcona*, the harsh ice of January 1942 forced *Medusa* to be moved into the dockyard, and while there she was badly damaged on 13 March when accidentally rammed by a tug while moored alongside, with damage on both sides of the ship. The four-week repair period included the stripping-out of the redundant forward boiler room (requiring the addition of concrete ballast to compensate for the lost boilers and ancillaries) and its conversion into a crew recreation space. The work was largely carried out by the ship's complement using equipment provided by the dockyard, as the dockyard's personnel could not be spared for a job of such low official importance.

When again withdrawn to the dockyard in the face of

ice in January 1943, *Medusa* was docked and shields added to the 10.5cm guns, as had been done in *Arcona* a few months earlier. Further modifications were undertaken during a major refit that began at the end of July 1943, when two more 10.5cm guns were added and the rangefinders upgraded to the 6-metre type. In addition, the former after searchlight tower was moved forward to carry a *Würzburg* antenna. The tower was significantly heightened, and the funnel and derrick post were both cut down in order to give the radar uninterrupted all-round coverage. A pair of searchlights were mounted on the funnel and a light topmast on the derrick post. In October *Medusa* keeled over in dry dock due to poor bracing; she nevertheless completed the refit as planned at the beginning of November and returned to her customary station on 5 November 1943. During her refit, *Medusa*'s place in the Vareler Deep had been taken temporarily by *Arcona*.



Medusa 1940–44

In her initial configuration in 1940, *Medusa* looked distinctly different from *Arcona*, especially with regard to her 'stovepipe' funnel amidships. By late 1942, a number of changes have occurred in her layout, prior to more radical changes during her 1943 refit. By 1944, she has shields for her guns, two 6-metre rangefinders, and a prominent *Würzburg* tower, raised above funnel height to avoid any danger of 'wooding'. (Drawn by Dirk Nottelmann)

The mild winter of 1943/44 did not require the Flak ships to take refuge in the dockyard, but on 15 February 1944 *Medusa* was accidentally rammed by a tug and had to be docked for repairs, the opportunity being taken to install a quadruple 2cm mounting (*Vierling*) on the port bridge-wing in place of the twin mount. The ship was back on station on 4 March.

Medusa was severely damaged in an attack by 14–16 fighter-bombers (including a number of De Havilland Mosquitos) around 14.30 on 19 April 1945, being hit by two bombs and suffering two near-misses, to port and starboard; casualties amounted to 22 dead and 41 wounded. She was, however, successfully towed into the dockyard by a pair of tugs, being secured in the Hipper (now-Großer) Hafen at 21.30, moored at the head of the Wiesbadenbrücke. As she was beyond immediate repair, four 10.5cm were removed for employment ashore on 22 April. The remaining two 10.5cm and one quadruple and four twin 2cm were ordered to be removed on the 25th, although this was not done. It had been planned to sink *Medusa* as a blockship outside Wilhelmshaven's III.



The forecastle of *Medusa* in 1944, with the shields added to the 10.5cm and 37mm guns and the forward 6-metre rangefinder prominent. (Dirk Nottelmann collection)

Entrance, but this was overtaken by the surrender of the port and she remained afloat, despite suffering extensive flooding.⁵ Her remaining armament was removed on 31 August, and by 2 September she was moored along



A set of images taken on board *Medusa* early in her career in 1940. Clockwise from top right: the forward starboard 10.5cm HA gun, still unshielded; coaling on the quarterdeck – note the steam-operated cargo winch, added during her conversion; one of the diesel generators in a former machinery space, with the switchboard overhead; the ship's cutter and the after end of the bridge structure. (Dirk Nottelmann collection)



Arcona and the ex-Dutch conversion *Undine* (see Part II) in the winter 1945/46, in the lock at III. Entrance at Wilhelmshaven, accompanied by the tugs *Enak* and *Heros*. Both former Flak ships seem to be in good condition. (Dirk Nottelmann collection)

Arcona



1940/41



1941/43



1943/44



1944/45

A selection of the camouflage schemes worn by *Arcona*. (Graphic by Dirk Nottelmann)

with *Arcona*, *Ariadne* and *Undine* (for the latter two vessels see Part II), together with the small ex-Dutch survey vessel *Jever*, in the Nordhafen. An aerial photograph of 3 September 1945 shows either *Arcona* or *Medusa* moored inboard of one of *Ariadne* and *Undine* opposite IV. Entrance. During the winter, *Arcona* and *Undine* were photographed together in III. Entrance; this may have been in February 1946, when *Undine* was in transit to the Netherlands (see Part II). Most sources have *Arcona* and *Medusa* broken up during 1947–50, but one report has the remains of *Medusa* still present in the Nordhafen as late as October 1955, alongside those of the fleet tender *Hai* (ex-*Königin Luise*, ex-F3, sunk at Kiel[!] in 1945), a submarine and two merchantmen.⁶

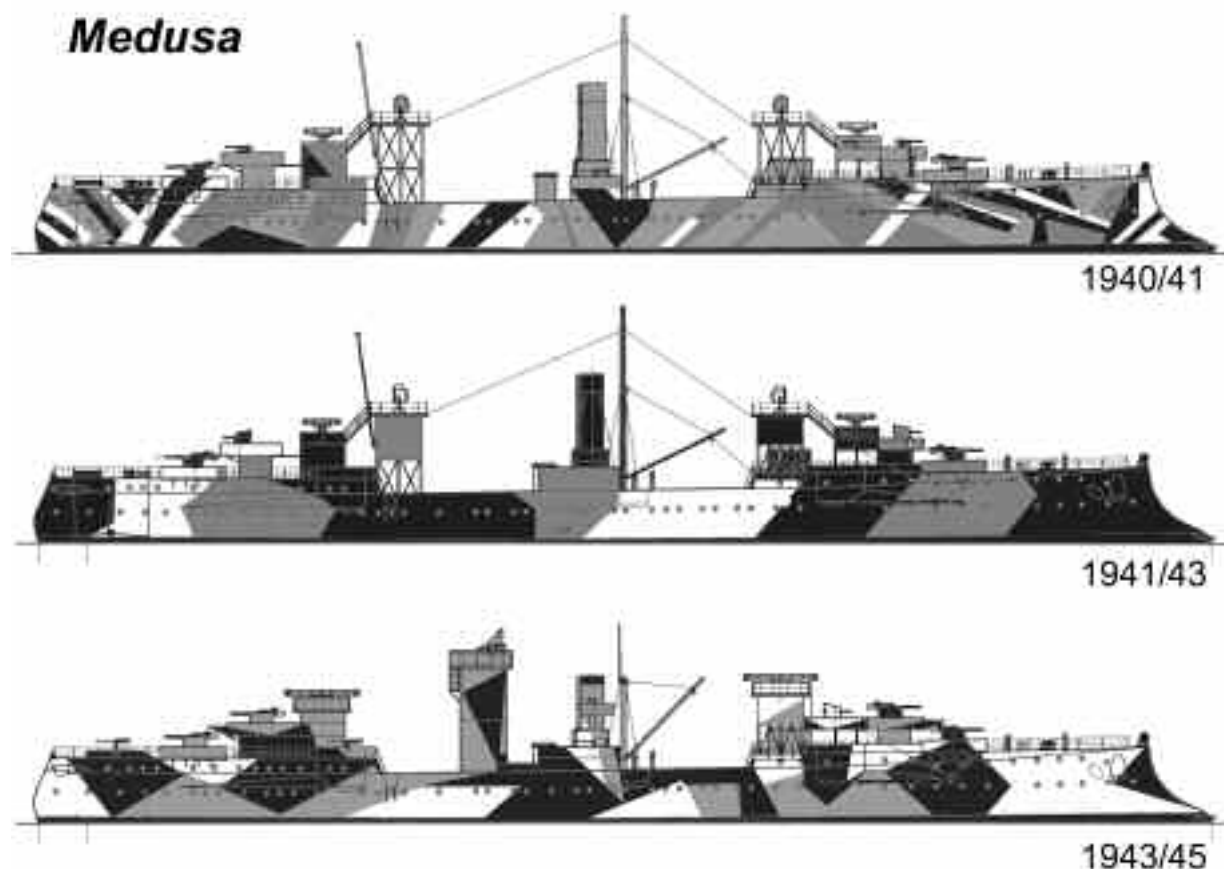
The final fates of *Arcona* and *Medusa* are complicated by the fact that, while both vessels were afloat at the end of war, with *Arcona* (although not the bomb-damaged *Medusa*) seemingly in good condition, the Allies' Trinational Naval Commission (TNC), charged with surveying all German warships during the autumn of 1945,⁷ noted both ships as 'wrecks'. This placed them in Category C, which mandated that they be destroyed no later than 15 August 1946. This was certainly what happened to all other significant vessels so classified. Ships still afloat were towed out into the Skagerrak and scuttled, and those resting on the bottom of the harbour were wrecked beyond hope of refloating by demolition

and depth charges, then scrapped *in situ*. For *Arcona* and *Medusa* to have been made exceptions would be contrary to the great care taken by the British authorities at Wilhelmshaven (and Kiel) to comply with the letter of inter-Allied agreements on the destruction of Category C vessels. The US authorities at Bremerhaven were equally scrupulous. However, the same cannot be said of the Soviets, who delayed taking action until 1947; although a considerable number of ships were then sunk, others were broken up afloat over a period of time.⁸

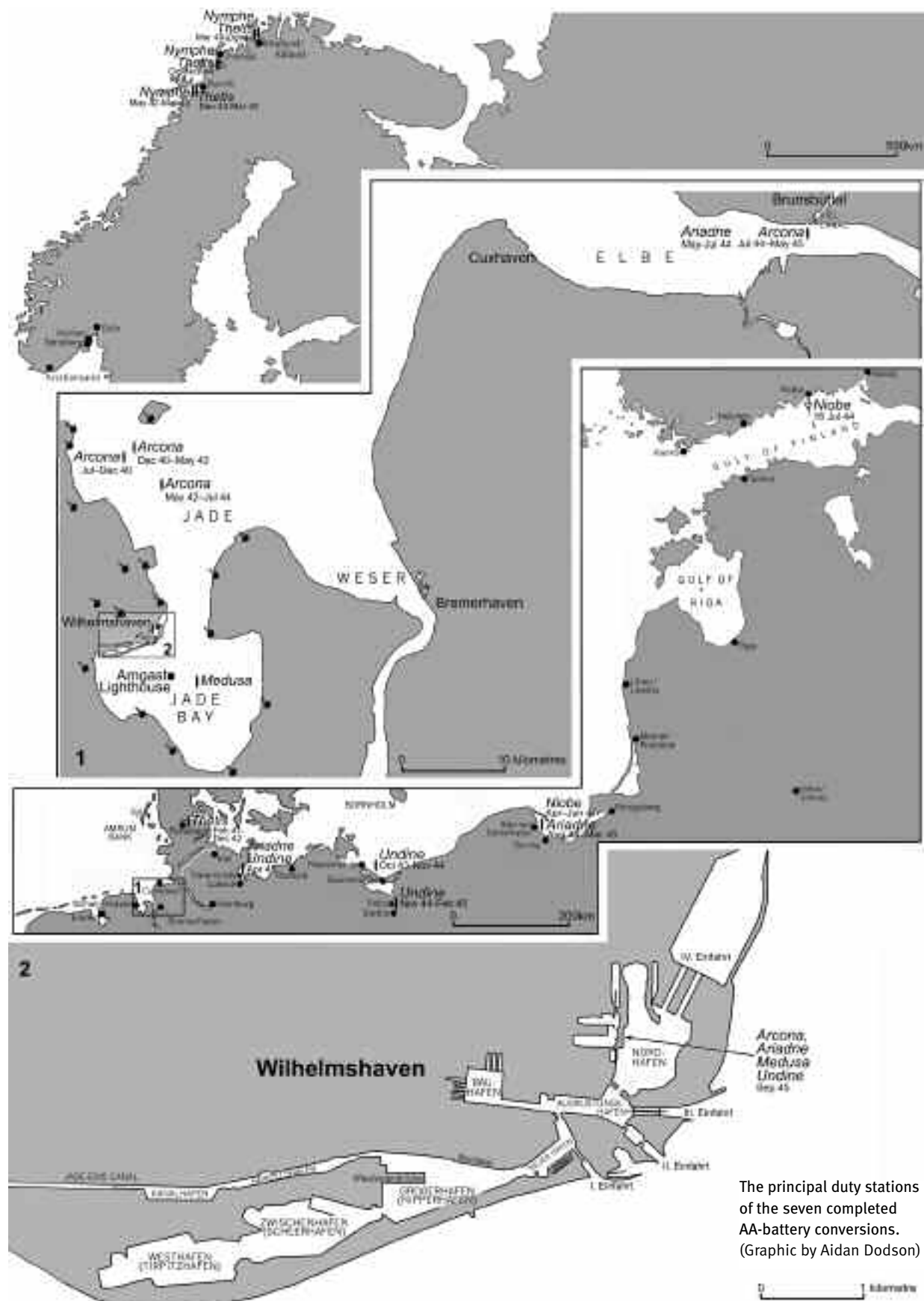
The ex-Norwegian Ships⁹

At the time of the German invasion of Norway in April 1940, the largest ships of the Norwegian Navy were four coast defence ships, built in pairs in the UK at the end of the 19th century.¹⁰ Two, *Norge* and *Eidsvold* (1900), were sunk by German destroyers on the first day of the attack (9 April), but the other pair, *Tordenskjold* and *Harald Haarfagre*, were captured intact laid up at Horten Dockyard later the same day. Both were taken in hand for conversion to anti-aircraft vessels, but as their machinery was in good order both would be capable of self-propulsion, and would have perhaps the most prominent part in the war of all the conversions.

The ships had been laid down by Armstrong at Low Walker on the Tyne on 18 March 1896, and launched as



A selection of the camouflage schemes worn by *Medusa*. (Graphic by Dirk Nottelmann)



The principal duty stations of the seven completed AA-battery conversions. (Graphic by Aidan Dodson)



Harald Haarfagre at sea early in her career, with minimal bridgework. (Aidan Dodson collection)

Harald Haarfagre on 4 January 1897 and *Tordenskjold* on 18 March the same year. They commissioned on 18 December 1897 and 21 March 1898 respectively.¹¹ As built, the pair were armed with a 21cm/45 gun fore and aft and six 12cm/45 on the upper deck amidships, backed up by six 76mm/40 and six 1pdr weapons. By the 1930s, two 76mm HA guns had been added and four of the 1pdrs landed. Machinery comprised three cylindrical boilers (one single-, one double-ended), supplying steam for VTE engines rated at 4500ihp, giving a top speed of 16.9 knots.

Tordenskjold was employed with the fleet up to the First World War, but from 1917 operated primarily as a cadet training ship; she undertook annual cruises until 1934, and had her bridge greatly enlarged in support of this role. From 1934 she was an accommodation ship for

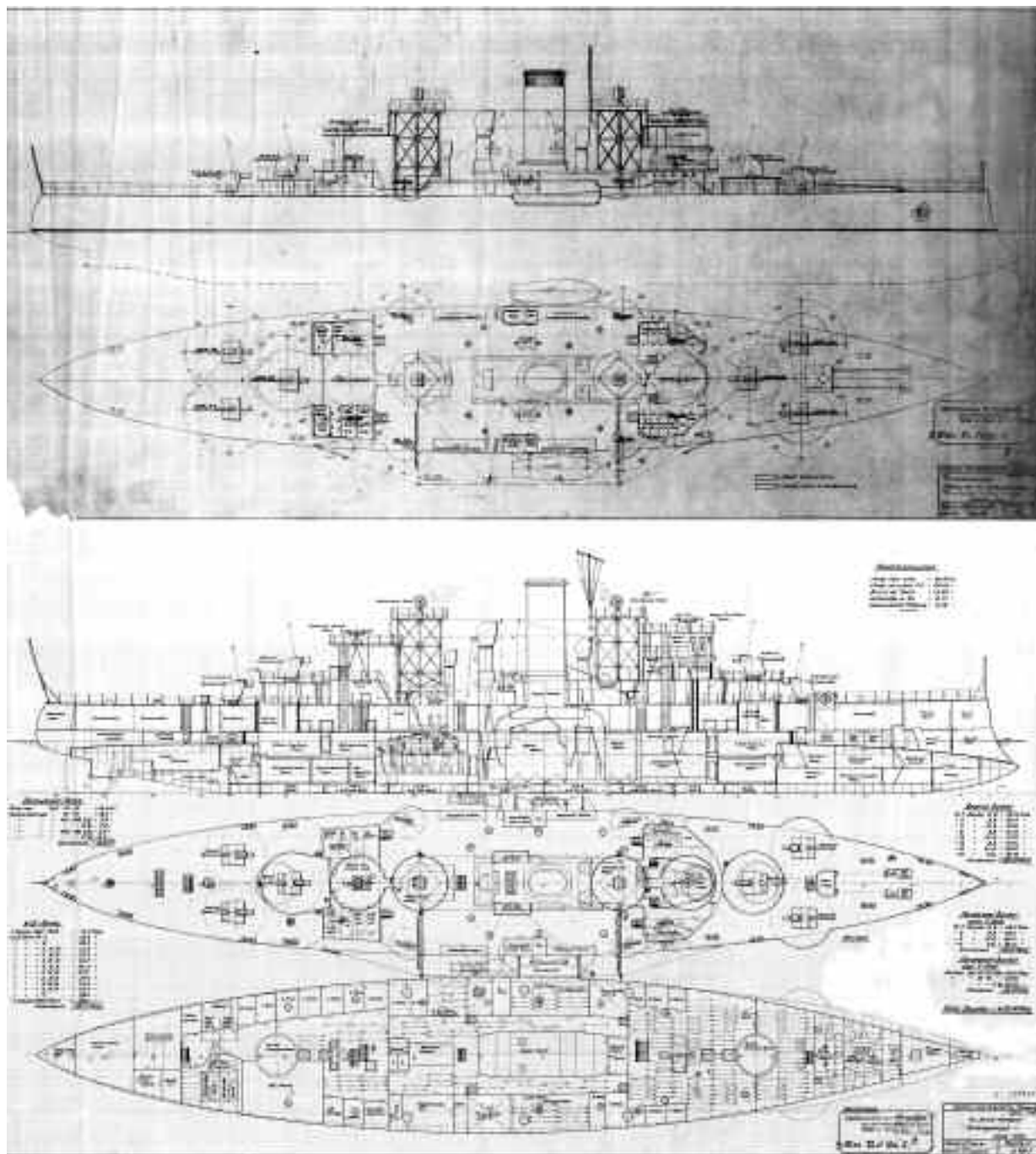
cadets at Horten. Like her sister, *Harald Haarfagre* had also been employed as a cadet training ship on occasion, in 1906, 1907, 1914 and 1920, as well as taking part in fleet exercises up to 1923. She was laid up by the late 1930s, becoming an accommodation ship for recruits at Horten in 1940.

Being virtually undamaged, the sisters were selected for conversion to Flak ships during the summer of 1940, with work beginning on 10 October. The surviving drawings suggest that *Tordenskjold's* conversion served as the model for the conversion of her sister. The reconstruction was planned and executed by Kaldnes Mekaniske Verksted at Tønsberg, although guns and associated fittings were installed at the Deutsche Werke, Kiel.¹²

The sisters commissioned under the German flag on 1 February 1941, *Tordenskjold* becoming *Nymphe*, and



Two images of *Harald Haarfagre* during her conversion into *Thetis* at Kaldnes Mekaniske Verksted at Tønsberg. Structural work is complete but she still lacks her armament, directors and searchlights, which will be installed at Kiel. (Dirk Nottelmann collection)



Plans for the Conversion of *Tordenskjold*

Two original plans for the conversion of *Tordenskjold* into *Nympe* dating from December 1940. Unlike her sister, she did not have the shelter deck abreast the funnel built out to the sides. (Dirk Nottelmann collection)



Thetis on trials, shortly after completion of the conversion in February 1941, 1941, wearing a very elaborate camouflage pattern. She now has the tripod mast abaft her funnel that would serve to distinguish her from *Nympe*. The guns are still without shields, as are the fire control directors. She has not yet been fitted with her deck-edge degaussing coil. (Dirk Nottelmann collection)



Thetis during the final stages of her fitting-out at Kiel. Her unique tripod mainmast has still to be erected. The photo gives an excellent view of the elaborate camouflage pattern with which she entered service. (Aidan Dodson collection)

Haarfagre taking the name *Thetis*; these names had both belonged to now-scrapped sisters of *Medusa*. This established a pattern of naming converted Flak ships after German small cruisers of the 1890s and early 1900s (see also Part II), implicitly placing them in a single class of vessel.

All existing armament was removed, and single 10.5cm/45 guns were paired on the forecastle and quarterdeck as in *Arcona* and *Medusa*. Being larger vessels, from the outset *Nymphe* and *Thetis* carried two more guns of this calibre in superimposed positions. According to the original plans, there were to be eight short-barrelled 4cm machine-cannon of unknown origin, four replacing the original corner 12cm weapons and four abreast the bridge, but in the event similar short-barrelled 2cm guns were planned to be substituted in all but two cases; this would be amended shortly afterwards to modern German AA guns of the same calibre. Directors with 3-metre rangefinders were to be fitted atop the original bridgework and on a platform on the cut-down mainmast. These were certainly fitted (with hoods) in *Thetis*, but photographs of *Nymphe* make it unclear whether she ever carried them. Tall lattice structures fore and aft of the funnel, which was shortened by some two metres, each originally supported a single searchlight, but

the forward model was later exchanged for a pair of sided smaller units in *Nymphe*, as would be done on *Medusa* for a while in 1942.

A major difference between the sisters as converted was that *Thetis* had a tripod mast installed aft of the funnel, a feature never present in *Nymphe*. Also, the latter did not have the shelter deck built out to the ship's sides abreast the funnel. In *Thetis* the shelter deck extension supported the ship's boats; in *Nymphe* these were



Thetis in the inner Kiel fjord in the autumn of 1942, painted in grey overall. Her forward searchlight appears to be covered by a tarpaulin, which renders it nearly invisible against the background. Hoods have been fitted to the directors, as well as splinter shields to the guns, and there is now a main topmast. Visible in the background are the hulked cruiser *Berlin* and the Hamburg-Amerika liner *New York*, both in use as accommodation ships. Shortly afterwards, *Thetis* would leave for northern Norway. (Dirk Nottelmann collection)



Nymphe in dry dock at Kiel, with her initial(?) camouflage pattern. Her degaussing coil is prominent; this was carried farther down the side of the hull than the deck-edge installation of *Thetis*. (Dirk Nottelmann collection)



By the time this photograph was taken in northern Norway, *Nympe* had been repainted in a new scheme, and the forward searchlight had been replaced by two smaller units. (Dirk Nottelmann collection)



Nympe in northern Norway in May 1943, with the battleship *Scharnhorst* in the background. (Aidan Dodson collection)

carried on davits. At the end of her career, *Nympe* had her forward lattice structure significantly heightened, presumably to receive a *Würzburg* antenna, although it is uncertain whether this was ever installed. Her after lattice structure was shortened at the same time, probably as topweight compensation. These modifications were not carried out in *Thetis*, although the forward searchlight platform was empty at the end of the war.

Information on the careers of the two ships is incomplete, with some confusion regarding their individual histories. *Thetis* is generally reported to have joined *Marine-Flak-Abteilung* 709 based at Harstad/Norway from the outset but several images, taken at different times as indicated by changes in her camouflage scheme, contradict this. Most images instead show her at Kiel, while another source claims that she was employed at Flensburg from February 1941, protecting the naval academy as well as the town and local shipyard against air raids coming along the Flensburg fjord. This deployment seems to have lasted until December 1942 (with a confirmed brief stint at Kiel in October), when *Thetis* was reported to be located at Kristiansand, Norway, finally on her way north.

Nympe is likewise reported to have initially joined *Marine-Flak-Abteilung* 214 at Kiel, suggesting a possible confusion of names. However, her transfer to Norway in May 1942, to join *Marine-Flak-Abteilung* 710 based at Tromsø, is confirmed. She would initially be deployed in the Ofotfjord off Narvik for the defence of the Bogen Bay anchorage. When the battleship *Tirpitz* moved her base from Bogen Bay to the new German fleet anchorage in the Altafjord/Kåfjord area in 1943, both *Thetis* and *Nympe* were moved there to provide Flak protection. Their powerful anti-aircraft batteries would be crucial in



Thetis in northern Norway late in the war, in yet another camouflage scheme. She has received a topgallant mast on her forward signal pole, but her profile has otherwise been little altered. (Dirk Nottelmann collection)



Thetis at Tromsø in 1945, once again in overall grey, but (like her sister) now with a broad black top to her funnel. Modifications seem limited to a shortening of her topmasts. The forward searchlight is missing, possibly in preparation for the installation of *Würzburg*. (Aidan Dodson collection)

the seaward defence of the anchorage following *Tirpitz*'s extensive damage by British midget submarines in September 1943, which left much of the battleship's artillery out of order for a while due to shock damage. Following the loss of *Scharnhorst* in December 1943, *Thetis* was moored in the Skillefjord for a while, opposite Stjensund, to allow her to employ her fast-firing battery against any small craft that might attempt to penetrate this narrow entrance to Altafjord. Eventually, both *Thetis* and *Nympe* moved with the battleship to Tromsø in October 1944; however, they were unsuccessful in preventing the battleship's destruction by bombing on 12 November 1944.

Contrary to some published sources, the German surrender actually found both ships still in northern



Nympe was run aground at Kunna, outside Svolvær, on 17 May 1945. She is shown here under salvage, with all significant fittings removed. An interesting detail is her heightened forward lattice structure, presumably intended to support a *Würzburg* antenna. Owing to her stripped state it cannot be verified whether this was ever fitted. (Aidan Dodson collection)

Norway. *Nymphe* was at Svolvær when she was ordered by the Norwegian authorities to sail to Narvik for the surrender of her German crew, together with some troops collected in the Lofoten islands. However, shortly after departing, on 17 May 1945, she had to be beached at Kunna, Meløy, after the (allegedly inebriated) former German crew had deliberately opened several seacocks. *Nymphe* subsequently sank in shallow water, her upper deck awash.¹³ She was sold to the Stavanger firm of Brodrene Anda in 1948, refloated and broken up at Stavanger. An anchor from *Nymphe* is preserved outside the Lofoten War Memorial Museum at Svolvær. *Thetis* ended the war at Kilbotn, near Harstad, being present during the bombing of the harbour during Operation Judgement on 4 May 1945. She was successfully returned to Norwegian control, and after a short period as an accommodation ship was sold to Stavanger Skipsopphugging in 1947; she was broken up the following year.

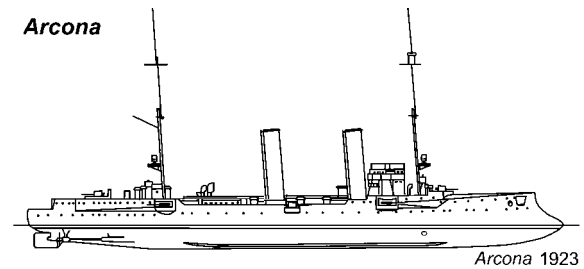
Archival Sources:

Deutsches historisches Institut Moskau, *Akte 143. Anweisungen und Schriftverkehr des Oberkommandos der Kriegsmarine (OKM) und der anderen Marinebehörden über den Umbau der Beuteschiffe in die schwimmenden Flak-Batterien in der Zeit vom Juli 1941 bis September 1944*, Bestand 500 Findbuch 12453 - Oberkommando der Kriegsmarine (OKM).

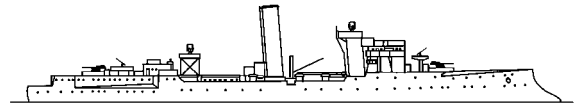
Endnotes:

- ¹ For a history of the air defence of Wilhelmshaven, see FA Greve, *Die Luftverteidigung im Abschnitt Wilhelmshaven 1939–1945*; 2. *Marineflakbrigade*, Hermann Lüers (Jever, 1999).
- ² The two ships are covered in detail in Greve, *op cit*, 224–47.
- ³ For the evolution of the German cruiser down to 1918, see A Dodson and D Nottelmann, *The Kaiser's Cruisers 1871–1918*, Seaforth (Barnsley, 2021); see also Nottelmann, 'The Development of the Small Cruiser in the Imperial German Navy', *Warship* 2020, 102–18, and *Warship* 2021, 44–60.
- ⁴ Under the Treaty of Versailles and related agreements, the *Reichsmarine* was allowed up to six operational cruisers, with two more in reserve. As all the more modern vessels had been surrendered to the Allies in 1920 or scuttled at Scapa Flow in 1919, the only such vessels available to them were the surviving ships of the *Gazelle*, *Frauenlob* and *Bremen* classes, launched between 1899 and 1903. See Dodson, 'After the Kaiser: the Imperial German Navy's Light Cruisers after 1918', *Warship* 2017, 140–60.
- ⁵ For this and the immediately following, see G Koop, K Galle and F Klein, *Von der Kaiserlichen Werft zum Marinetechnik seit 1970*, Bernard & Graefe Verlag (Munich, 1982), 72–73.
- ⁶ *Op cit*, 78.
- ⁷ Dodson and Cant, *Spoils of War*, 186–88.
- ⁸ *Op cit*, 194–97.
- ⁹ Our thanks to Geirr Haarr for his comments on this section.
- ¹⁰ P Brook, *Warships for Export: Armstrong Warships 1867–1927*, World Ship Society (Gravesend, 1999), 205–210.
- ¹¹ S Mo, *Norske Marinefartøy*, Bodoni Forlag (Bergen, 2008).
- ¹² The latter accounts for the incorrect claim in a number of secondary sources that the reconstruction was undertaken at Kiel.
- ¹³ See www.myheritage.no – *Historier fra Ofoten*, 8.

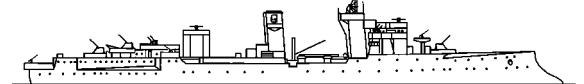
Arcona



Arcona 1923

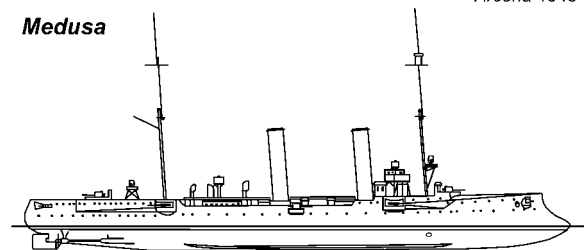


Arcona 1940

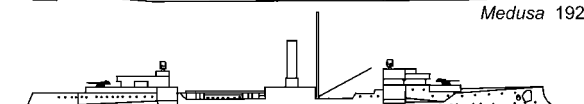


Arcona 1945

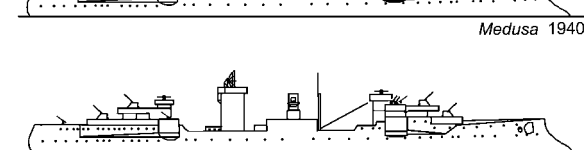
Medusa



Medusa 1924

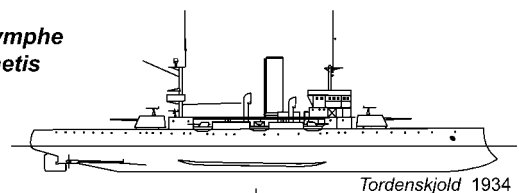


Medusa 1940

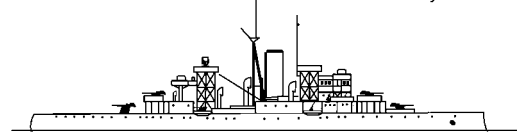


Medusa 1945

**Nymphe
Thetis**



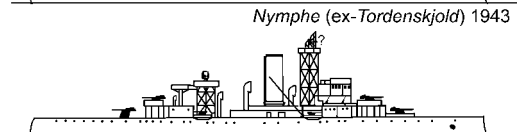
Tordenskjold 1934



Thetis (ex-Harald Haarfagre) 1941



Nymphe (ex-Tordenskjold) 1943



Nymphe (ex-Tordenskjold) 1945

0 20 metres

(Drawn by Aidan Dodson)