

WEHRMACHT CAMOUFLAGE UNIFORMS

& Post-War
Derivatives

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INTRODUCTION

The use of camouflaged clothing by military forces is by no means a recent phenomenon. Historical accounts of painting, or otherwise covering metallic armour for ambushes or night time operations date to the ancient world. The practice of medieval hunters wearing subdued shades of brown or green is also well attested; and indeed, the wearing of specialized garments for the purpose of concealment can be documented in even earlier cultures. Early European explorers recorded that some Native American hunters concealed their bodies with the skins of animals in order to approach their prey more closely; and it would seem logical that the same tribesmen would sometimes have employed similar practices in their inter-tribal warfare.

In the modern age of gunpowder, however, it could be said that the Germans were the pioneers in the use of uniforms of colours chosen for concealment, and as early as the 17th and 18th centuries. This was probably not from any direct tactical intent, but an indirect result of their being the first to recruit into their military establishment rifle-equipped hunters or *Jägers*, who naturally retained elements of their traditional forest green hunting clothing in the uniforms they wore.

The Germans had no monopoly over the concept of camouflage, however. The mid- to late 19th century brought improvements in firearms that made the practice of infantry advancing shoulder to shoulder with paradeground precision an inadvisable, even suicidal manoeuvre. In the last decades of the century most major armies adopted khaki field uniforms for colonial operations.

All warring countries devised some sort of camouflaged clothing during World War I for the use of snipers and other personnel particularly exposed to danger on the static, close-range battlefields dictated by trench warfare; but it is not believed that any of these examples were pattern-printed, presumably because wool - difficult to print with multi-coloured patterns - was the predominant material for field uniforms. Nevertheless, it is evident that the concealment value of multi-coloured camouflage patterns was understood: military equipment of all kinds, from trench helmets to battleships, was painted in disruptive coloured patterns by most of the combatant forces. Credit can be given to the Germans, however, for producing the first printed



Some of the earliest examples of German "camouflage" uniforms were those worn by 18th-century rifle-equipped *Jägers*, who were recruited from among the hunters and foresters of various heavily wooded states; this reconstruction is an example of a Hessian *Jäger* of the 1770s. Forest green remained limited to a minority of light troops, however; during the 19th century most German line infantry, and particularly the increasingly dominant Prussian Army, retained

dark blue service uniforms. In 1910 the Germans adopted *Feldgrau*, "field grey", for all line uniforms (though *Jägers* were initially issued a slightly greener shade). Various slightly differing shades of greenish grey remained the standard for German woollen combat uniforms through both World Wars. In the Second World War camouflage pattern printed clothing supplemented, but never replaced the field grey uniform in combat.

camouflage-patterned cloth - the elaborate geometric "lozenge" patterned fabric used to cover the visible surfaces of many German aircraft was generally factory-printed in strips, and attached to the frames matched edge to edge like patterned wallpaper, rather than being laboriously painted by hand.

Though it has been frequently claimed in other works, however, credit cannot be given to the Germans for being the first to provide their soldiers with factory-produced, regulation issue items of pattern-printed camouflage cloth. It was the Italian Army of the 1920s which first issued the troops with a combination shelter half and poncho made of cotton duck factory-printed in a camouflage pattern. Interestingly, this same Italian camouflage scheme has persisted, virtually unchanged, into the 1990s, making it undisputably the world's most successful camouflage pattern. (Italian material was also used extensively by German forces in World War II.)

Nevertheless, it was the German armed forces which made the most innovative and extensive use of camouflage-printed uniforms and equipment during World War II, and these patterns and items are the primary subject of this work and its companion volume.

Organisation and typology

The first aim of this project has been to establish a definite typology for German camouflage patterns and garments, since much confusion over their designations exists among post-war collectors. Appropriately, I believe, the terms used here for the various camouflage patterns described are those employed by the German forces themselves, though even here there is often no universal nomenclature for a given pattern. Just as elements of medieval armour are known by French terms, it is only appropriate that German terminology be used in discussing German camouflage clothing. Throughout this book German terms will appear in *italics*, and a glossary of terms can be found at the end of the book.

For various reasons the author has also included in this book camouflage patterns and clothing of the post-war German military establishments. Primarily, this is because my intent is to document the entire history of German camouflage-printed uniforms. Secondly, they are included for the benefit of uniform collectors, since post-war items are often confused with (and sometimes unscrupulously sold as) the World War II equivalents. For the same reason similar foreign camouflage patterns, obviously inspired by German originals and occasionally confused with them, are also included here. Finally, it should be noted that post-1945 camouflage clothing can be interesting and collectable in its own right: indeed, some of the post-war German items are actually rarer than many of World War II vintage.

This first volume of a two-part series deals with what essentially can be considered *Wehrmacht* patterns, together with those post-war German and foreign variations obviously inspired by the World War II originals. The term "*Wehrmacht*" does not mean the

German Army (*Deutsches Heer*), but is rather the collective term for the German "national" armed forces (Army, Navy, and Air Force), as opposed to the Nazi "political" armed forces - essentially, the *Waffen-SS*. Whether by accident or design (though conveniently for the format of these books), the whole field of German camouflage clothing patterns can be fairly evenly divided into two broad categories based on the characteristics of the original *Wehrmacht* and *Waffen-SS* patterns.

"*Wehrmacht*" camouflage, whether of the *Heer* or *Luftwaffe*, is generally characterised by an overprint of intermittent lines or "raindrops" (referred to in German as "*Strich*"), a feature notably absent from all the patterns developed by the *Waffen-SS*. Thus, this first volume will examine all German camouflage clothing in which the "*Strich*" element forms some part of the scheme. The second volume (*Europa-Militaria* No.18) will examine the camouflage patterns of the *Waffen-SS*, as well as the derivative post-war patterns from which the "*Strich*" elements are absent. Thus, included in both the *Wehrmacht* and *SS* volumes will be patterns of the West and former East German armies based on their similarity to the World War II originals.

To some this may seem a rather confusing or disjointed way of presenting the subject; but, after considerable thought, the author believes it to be the best way to arrange the material for anyone but the most experienced collectors. By means of this system of classifying camouflage patterns by their physical characteristics (rather than by the identity of the primary users), anyone can use these books to identify an unknown camouflage-printed item of probable German origin with reasonable ease.

As with all other books ever written on German World War II military clothing, there will invariably be collectors among the readers who will raise the cry that some of the items pictured in these two volumes are copies. The difference between these books and previous works, however, is that the bulk of this collection was personally obtained by the author 15 to 20 years ago, often at very nominal prices, from Turkish used-clothing dealers at the Frankfurt "flea market". As it was related to me, these military items were gleaned from among tons of less valuable rags from a cloth recycling plant in nearby Darmstadt. Longtime European dealers in German militaria are probably as familiar with this once-important source as they are today with the eastern European sources which have come to the fore since the raising of the Iron Curtain. A difference is that, with the ridiculously high value of these garments today, many of these eastern European "bargains" are extremely clever fakes.

Finally, we would point out that all the photographs published here were taken specially for this book; and a caption reference to e.g. "a German paratrooper in Sicily, 1943" means "the uniform appropriate to these troops at this date, worn by our model in a photographic reconstruction".

HEERES-SPLITTERMUSTER 31

The earliest of all World War II German camouflage patterns was ordered in June 1930 to be printed on the new triangular tent-poncho combination (*Dreieckszeltbahn*) which would replace the rectangular grey *Viereckige Zeltbahn* the following year. Thus was born the "*Zeltbahn 31*", destined to become possibly the most widely produced camouflage-printed "garment" in history. Virtually every soldier of the World War II German Army, Air Force, Naval Artillery and various Police formations was issued the *Zeltbahn 31* in the so-called *Heeres-Splitter* camouflage pattern, and it must consequently have been manufactured in its millions.

This *Splitter* ("splinter") pattern was obviously inspired by the many similar types of "dazzle" camouflage painted on ships and other equipment in World War I. Although the angular and sharply contrasting elements of the design might seem an ineffective camouflage scheme, in reality, at any distance the angular splinter effect disappears in a blur of subdued colours.

Some writers have maintained that the *Zeltbahn 31* was not intended to be worn as a camouflage garment, but rather to be used only as a shelter, or worn as a poncho in wet weather. Whatever the original intent,

the *Zeltbahn* was in fact commonly worn as a camouflage garment, as attested by both photographic evidence and interviews with veterans.

The *Zeltbahn* appears to have been the only item of standardized camouflage to be issued to the German Army in over a decade. It was probably in the spring of 1942 (no specific orders can be located) that the German Army began to issue, as a set, a pullover "shirt" (*Tarnhemd*) - in English parlance, a smock, the German usage presumably being due to the pullover design of contemporary German uniform shirts - and a helmet cover (*Tarnhelmüberzug*), made of a lightweight herringbone twill linen drill material. One side of both the helmet cover and the smock were printed in the same splinter pattern as the *Zeltbahn 31*, while the reverse sides were left in natural white as a snow camouflage.

This set was unquestionably inspired by the early camouflage garments of the *Waffen-SS*, which predated them and which they closely resembled in

An exceptionally brightly coloured example of a *Heeres Zeltbahn* dated 1940. Normally the *Zeltbahn* has only one large grommet in each corner; this one is unusual in having five extra grommets, two on each side and

one in the centre bottom which is reinforced with leather; all seem to be factory-fitted. Although the buttons and grommets appear to be painted white this is simply the effect of oxidation on the zinc.





construction. Both Army and SS smocks were cut very full, to be worn over the field grey uniform, with vertical slash openings in the torso sides for access to uniform pockets beneath. Both were also collarless, to allow clear visibility of the collar devices of the uniform jackets worn beneath. There were minor differences: the Army smock was secured at the waist by a drawstring, and at the cuffs by buttons, whereas the SS model used elastic throughout. The Army helmet cover was secured by a simple drawstring, as opposed to the more complicated SS system of rocker clips and springs.

The only other regulation issue garment to be manufactured in the *Heeres-Splitter 31* pattern was the *Wintertarnanzug* of padded jacket, matching trousers, separate insulated hood and mittens, often but not invariably reversing to white. This outfit was the response to the bitter Russian winter of 1941, and was approved for manufacture in April 1942. For the winter of 1942, the writer believes that only a small proportion of these suits were produced in camouflage pattern, the majority being made in either a neutral "mouse" grey or traditional greenish "field grey" reversing to white.

Although these appear to be the only standard issue clothing items produced in the *Heeres-Splitter* pattern, a myriad of non-regulation garments and helmet covers were "field-" or "tailor-made" from Army *Zeltbahn*

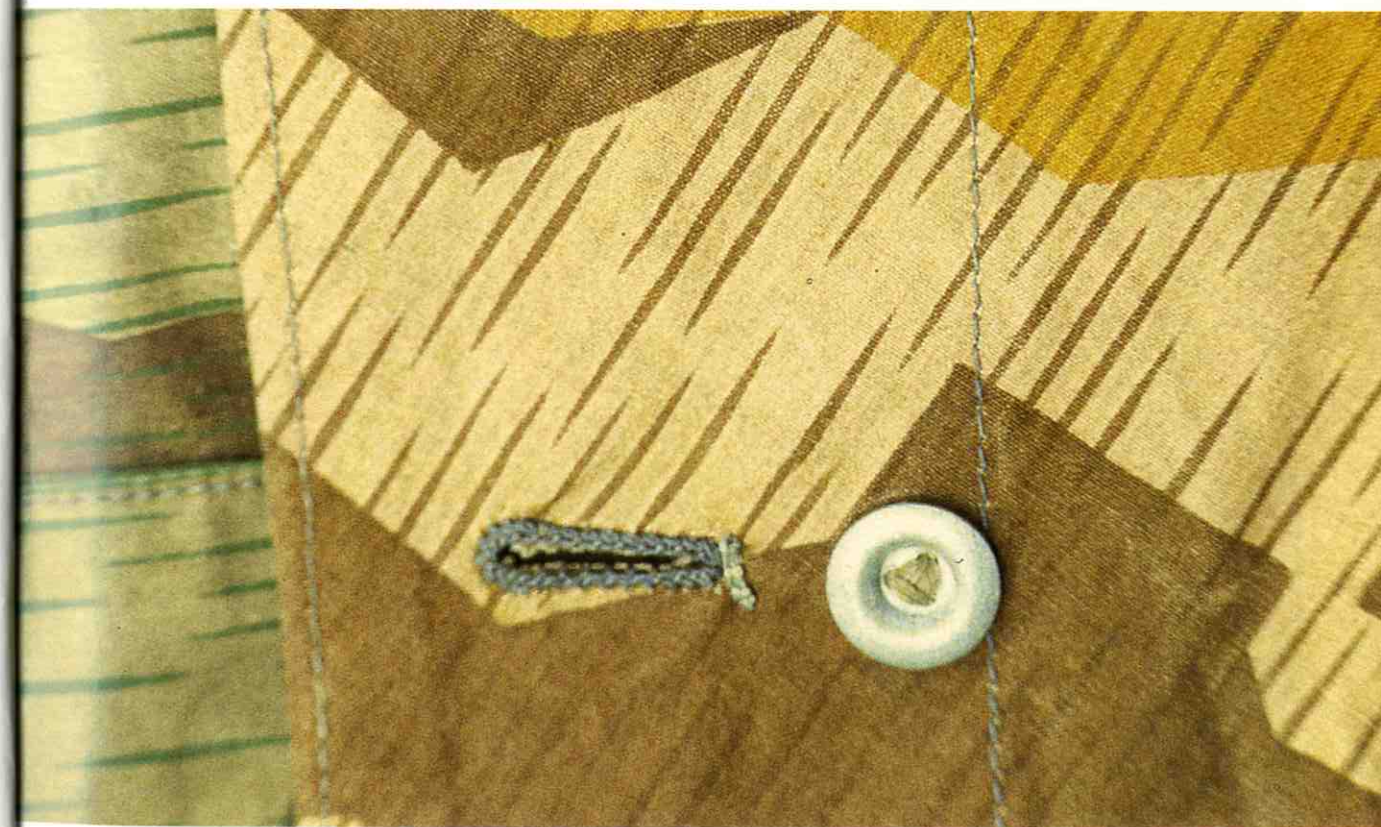
(Above) Detail of a very early *Zeltbahn* bearing a unit marking and the date 1936. Between 1931 and 1945 this item remained almost unchanged in material and construction.

material; these included everything from the crudest field expedients to excellently tailored camouflage versions of the service dress tunic, seen in photographs worn with complete insignia. Parachutists' jump smocks and *Luftwaffe* Field Division jackets manufactured from *Zeltbahn* material are in all likelihood post-1945 forgeries, though there is a remote possibility that some could be original: a factory making these specialized *Luftwaffe* garments might have run out of the regulation cloth and substituted *Zeltbahn* material as an expedient. There do not appear to be any archival photographs to confirm this possibility, however.

(Right) This photo illustrates the *Zeltbahn 31* as worn in wet weather or for concealment. The *Zeltbahn* on the right is a rare example in which one side is printed entirely in shades of brown; the reverse side has normal coloration.



(Below) Detail view of the rare brown-variant *Zeltbahn*, the reverse of which (seen at left) is in the normal grey-green colour. It is not known whether this was designed for some special purpose (e.g. *Afrika Korps* use?) or was simply a manufacturer's accidental variant. Perhaps it was manufactured by a firm which primarily produced SS pattern *Zeltbahnen*, all of which have both a green "spring-summer" side, and a brown "autumn-winter" side.



(Right) A one- to two-man officers' tent in *Heeres-Splittmuster* camouflage cloth. The panels are too large to have been made from *Zeltbahnen*, indicating that it is a factory-manufactured piece. These were apparently purchased by/issued to officers, who would not normally share the pyramidal three- or four-sided shelters with their men.



(Left) Three *Zeltbahnen* buttoned together to form a shelter. There was virtually no limit to the number of additional *Zeltbahnen* that could be added to create larger shelters. The soldier wears a field jacket in the *Luftwaffe-Splittmuster*, to illustrate the difference between the two patterns. *Zeltbahnen* were never manufactured in this *Luftwaffe* pattern.



(Top left) A typical manufacturer's mark on a 1941 production *Heeres Zeltbahn*. Some examples are entirely devoid of markings.

(Top right) *Zeltbahnen* of the later war period (as well as other items of uniform and equipment) are often marked only with the *Reichsbetriebsnummer*. This was a coding system under which each manufacturer of war material had its own unique number, thus eliminating the need for a name and address. This example is also dated 1944.



(Left) The *Heeres-Splittmuster Tarnhemd* and *Stahlhelm Tarnhelmüberzug*. This ensemble was inspired by the success of the similar version issued before the outbreak of war to the *Waffen-SS*, although - oddly - it was never produced in comparable numbers. Even though they are more rarely found today, these garments are generally priced lower than their *SS* counterparts. Unlike the *SS Tarnhemd*, which is usually manufactured from cotton-rayon *Zeltbahn* cloth, the *Splitt-Tarnhemd* was manufactured from linen drill in a herringbone twill weave.



(Above) Details of the *Splitter-Tarnhemd*. While the garment superficially resembles the first model SS smock in construction, the photograph illustrates those details unique to the Army models. Whereas both versions of the *SS-Tarnhemd* have elasticized cuffs and waistbands, the *Heer* version used a drawstring waistband and buttoned cuffs. The collarless, lace-up neck opening and slash breast openings were common to both Army and SS first model camouflage smocks.

(Left) Detail of one of the twin slash openings in the *Splitter-Tarnhemd*, which provided access to the pockets of the uniform jacket normally worn beneath this smock. The manufacturer's name, "B. Rawe & Co.", is stamped on the white side of the flap; curiously, although the Germans do not use the word "company", the "Co." abbreviation is not uncommonly seen in the names of German businesses.

(Right) The *Heeres Winterarnanzug* in *Splittermuster*. This is the earliest model, manufactured from standard reversible cotton-rayon *Zeltbahn* cloth, giving it a somewhat stiff appearance. The uniform is reversible to white, and the use of regular *Zeltbahn* cloth is discernible where the material has been torn. This suit was probably manufactured in 1942, prior to the production of the lighter weight 100% spun rayon camouflage cloth normally used for the outer shell of these winter uniforms.





(Above) Detail of the hoods in the first and second models of the *Wintertarnanzug*. The first - left - is produced in heavier *Zeltbahn* cloth; it has two layers of cloth in the neck area and a button and loop beneath the hood. The simplified second model, manufactured in a 100% rayon shell, lacks these features.

(Left) Detail of the trousers issued with the *Wintertarnanzug*. Like all other elements of this uniform, they are completely reversible.



(Above right) The *Wintertarnanzug* on the right is manufactured in the lighter weight 100% rayon shell, as are most examples of the uniform. It is, however, unusual in that it exhibits a manufacturing error: the *Strich* or "raindrop" element runs in a horizontal direction on the body - a vertical arrangement is almost universally found in such patterns.

(Right) Completing the *Wintertarnanzug* is an insulated hood, the tail of which, normally tucked into the jacket, is left exposed here for better visibility. The hood on the right shows the extreme variance of colours possible in the *Splittermuster*, being entirely in shades of brown and tan. The manufacturer's stamp can be seen on the white interior of the hood.





(Above) Detail of the mittens issued with the *Wintertarnanzug*. These have no provision for firing a weapon; later models, produced in the *Sumpfmuster* pattern described in a later chapter, remedied this fault by the provision of a separate trigger finger.

(Right) Detail of manufacturer's stamp in the separate hood of the *Splittermuster Wintertarnanzug*. Most examples are not nearly as well marked as this one, usually displaying only a size and an RB number. Below the manufacturer's stamp are head sizes, both civilian (size 57) and military (size 3).

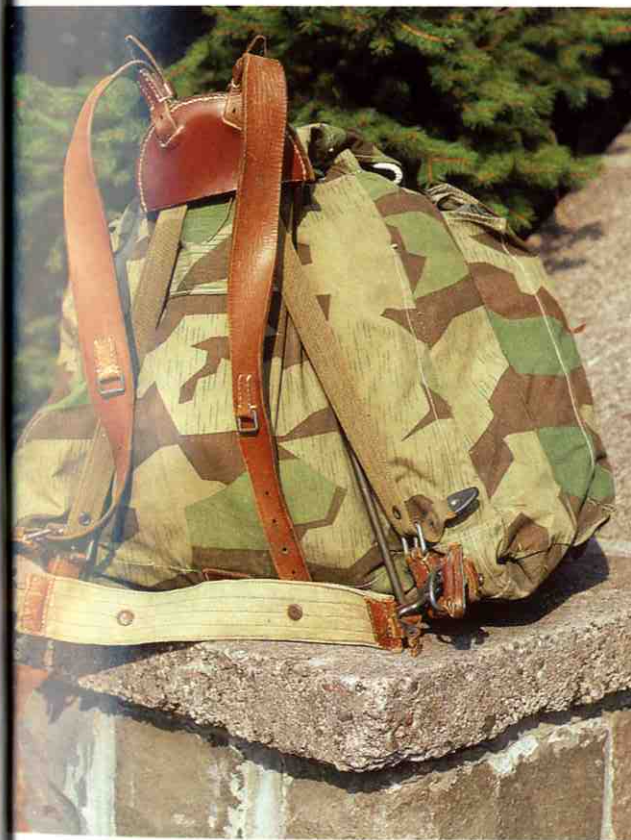


(Right) Detail of manufacturer's stamp in the inside of the trousers of the *Splittermuster Wintertarnanzug*. "Grosse I" would be equivalent to "small".



(Left) There are many examples of "field made" uniforms manufactured from the cloth of the *Zeltbahn 31*. Most common are versions of the four-pocket service tunic and trousers, though every conceivable style of military garment seems to have been made, from capes to tropical shorts. Lack of space prevents our showing individual examples, with the exception of this interesting version of the *Panzer/ Sturmgeschütz* uniform; note the large breast pocket, as also seen on some issue denim and HBT armoured troops' working uniforms.

(Below left & right) Rucksacks manufactured from *Heeres Zeltbahn* cloth are fairly common, though most seem to be privately made rather than factory issue; the majority were crudely sewn together immediately after World War II, for refugees to carry their belongings. This example is a rare exception which is actually made better than most WWII German issue rucksacks, complete with an integral metal frame and factory quality suspension system. There are no markings to confirm a WWII date, though in all probability, based on the construction techniques and materials, it is a wartime item. Identical rucksacks have also been observed in *SS-Eichenlaub* camouflage cloth, a further indication that these are of WWII vintage.





(Top left & right) Unusual variation of Heeres-Splittmuster pattern cloth used in a camouflage apron ("Heeres Tarnungs Körper-schurze"), a late-war expedient garment previously known only in the Wehrmacht Sumpfmuster pattern.

Here the standard splinter pattern *Zeltbahn* camouflage is printed over an unknown irregular blotch pattern, faintly visible. This pattern is printed on one side only, the other being perfectly normal.



(Left) Detail of what is apparently an extremely late *Zeltbahn*, exhibiting the same carbon black "dripping" overprint as the 1945 *Liebmuster* which was to become the last camouflage pattern of both the Wehrmacht and the Waffen-SS (see second volume, *Europa-Militaria* 18). The light-absorbing carbon black

element was introduced because of the first appearance of infra-red imaging equipment, which negated the effectiveness of earlier patterns. This example lacks a manufacturer's stamp and never had buttonholes or grommets fitted, indicating that it was probably left unfinished when the war ended.

LUFTWAFFE-SPLITTERMUSTER 41

The Heeres-Splittmuster pattern inspired a very similar type which was used in special *Luftwaffe* uniforms and equipment. Apparently, the Air Force decided that the splinter patterning on the *Zeltbahn* 31 should be reduced in size and made somewhat more intricate for a better camouflage effect on clothing. The basic splinter pattern seemed to be retained to show affinity with the Army, though troops of some Air Force formations (e.g. the Division "Hermann Göring") occasionally wore *Waffen-SS* camouflage clothing, presumably for reasons of availability.

Previous writers have differentiated the Heer and *Luftwaffe* patterns as "1 and 2" or "A and B". I feel that the terms *Heeres-Splittmuster* and *Luftwaffe-Splittmuster* are the most logical, as the former was first developed and used by the Army, and the latter was developed, and used exclusively by the Air Force (with the rare exception of SS paratroopers).

This pattern was probably first produced in 1941 for the parachutists' jump smock, or "*Knochensack*" ("bone sack"), and its use in the invasion of Crete is well documented. There is no evidence for its use in the campaigns of 1940. Clothing produced in the *Luftwaffe-Splitt* pattern seems to have been limited to two basic types of garment: the parachutist's jump smock, and the Air Force Field Division jacket.

Two versions of the jump smock were produced in *Luftwaffe-Splittmuster* camouflage cloth. The earliest, and by far the rarest, was the "step-in" model with permanently tailored-in vestigial legs; this was a short-lived design, for obvious reasons - answering calls of nature in the field required complete removal of personal equipment. The second model closely resembled the first, but opened all the way down the front and could be put on like a normal jacket; for para-jumping the skirt would be secured snugly between the legs and around each thigh by means of metal press studs.

In the collecting field, parachutists' smocks have become one of the most expensive and sought-after items of German World War II field uniform; and naturally, this demand has led these garments to be extensively faked. Most common are copies made from the Army pattern splinter cloth of the cheap and easily obtainable *Zeltbahn*. Though the Army and Air Force splinter patterns are similar to the untrained



(Right top & right) The second model parachutist's jump smock in *Luftwaffe-Splittmuster*. It is seen here with the matching

helmet cover, and the bandolier for the K98 Mauser rifle. The bandolier holds 20 five-round clips of ammunition.

eye, I do not believe that there is any archival photographic evidence for the wartime use of Army-pattern splinter cloth in the manufacture of the parachutist's jump smock.

The *Luftwaffe* Field Division jackets do not seem to have been produced before 1942. The earliest photographic evidence for their use which this writer has seen comes from North Africa in late 1942-early 1943. These early models were produced from the same heavyweight, windproof, splinter pattern cloth as the jump smock, and used the same press studs for the jacket cuffs. Later Field Division jackets were made of cheaper varieties of cloth and had button cuffs instead of press snaps.

In addition to clothing, several equipment items were also manufactured from *Luftwaffe-Splinter* cloth. These included covers for the parachutist's steel helmet, though there seems to be no evidence of factory-made covers for the regular Model 1935 and 1942 steel helmets as worn by members of the Field Divisions. The factory-issue parachutists' helmet covers were made from the same cloth as the smocks, the camouflage pattern being printed on the outside only.

Ammunition bandoliers for both the K98 Mauser and the FG42 assault rifle, as well as grenade bags, were also manufactured from *Luftwaffe-Splinter* cloth.



(Left) Detail of "Elite" zipper commonly used on original splinter-pattern jump smocks; the unavailability of original zippers is one of the chief obstacles to fakers. Also visible here is the ribbed, twill type material which is characteristic of these early-war "bone sacks". The camouflage pattern was printed on the exterior only. The smock is perhaps the most difficult of all German camouflage garments to reproduce exactly, due to the three-colour thread, interwoven twill which is apparent under close examination. Like the *Zeltbahn*, the smock was manufactured of 33% rayon/67% real cotton, while the majority of camouflage garments were made entirely of synthetic fibres.



(Above & right) Further views of the second model "bone sack", this time with the bandolier for the paratroopers' FG42 assault rifle. Each pocket carries one 20-round box magazine, totalling 160 rounds.



(Above & right) Grenade bags for the *Steilhandgranate* Models 1939 and 1943. As these are manufactured in the *Luftwaffe-Splintermuster* it is highly probable that they were a specialized equipment item for paratroopers, and possibly *Luftwaffe* Field Division troops. Barely discernible is the black webbing strap connecting the top inner corners of the bags behind the neck; a second strap across

the small of the back connects the bottom corners. The distinctive *Luftwaffe* splinter camouflage pattern is printed on one side of the cloth only. The zippers are marked "Elite", and are identical to many used on jump smocks. Some original grenade bags have white plastic zippers marked "Ri-Ri", as also occasionally used on the jump smock.

(Below) The fronts of most jump smocks, and of *Luftwaffe* Field Division jackets, are secured by large diameter blue glass (as here) or plastic buttons.



Thousands of unused buttons of this type survived the war, and they are therefore seen on fake as well as original garments.



(Above) An 8.8cm Flak 39 dual purpose gun depressed for use against ground targets. Each of the three figures wears a different version of essentially the same *Luftwaffe* Field Division combat jacket.

(Right) The gun-layer in the foreground wears the earliest version of the Field Division jacket, made out of the same heavy duty, windproof twill cloth as the paratroopers' jump smock; another feature in common is the use of "Pym"-marked press studs, which were replaced by regular buttons on the later-version jackets. The figure behind him wears the second version of the Field Division jacket made of the same tightly woven cotton/rayon fabric as the *Zeltbahn*, but printed in the *Luftwaffe* pattern and on one side only.





(Left) The range-finder wears the latest, and most common version of the *Luftwaffe* Field Division jacket, made of linen drill in the distinctive herringbone twill weave. Although this material was commonly used for Field Division jackets it is never found used in parachutists' smocks of the same camouflage pattern; the linen drill material lacks the windproof qualities required in a garment designed for airborne use.

(Right) Interior detail of the earliest version of the Field Division jacket, produced from the same heavy cotton/rayon material as the early jump smocks. The interior pocket is made of scrap *Luftwaffe* blue canvas, as often used in Air Force rucksacks, bread bags and other equipment.



POST-WAR: BUNDESGRENZSCHUTZ-SPLITTERMUSTER

For generations, most countries of continental Europe have maintained a "border guards" service separate from their regular Police and Army establishments. The German (Federal) Republic is no exception; its *Bundesgrenzschutz* (BGS) is equipped up to the level of light aircraft and armoured vehicles, and includes within its organisation the country's elite anti-terrorist commandos, the GSG-9 group.

The *Bundesgrenzschutz* was formed in the 1950s, before the *Bundeswehr*, and operated under the Ministry of the Interior. For both formal duties and under field conditions the BGS wore uniform distinctly different from the Army, including the use of a virtually unchanged World War II style steel helmet. This penchant for traditional *Wehrmacht* fashion was also evident in the BGS's choice of camouflage uniform, the first pattern of which was clearly derived from the *Zeltbahn* 31. The "BGS-Splintermuster" is a much closer copy of the original *Wehrmacht* pattern than that adopted by the *Bundeswehr*; in fact, it is possible that the printing equipment used may have been left over from World War II. Two distinguishing features differentiate *BGS-Splintermuster* from *Heeres-Splintermuster*. Firstly, the background colour of the BGS pattern is an extremely

pale grey, nearly an off-white; and secondly, all BGS splinter camouflage material, whether used in the manufacture of *Zeltbahnen* or clothing, was printed white on the reverse side for snow camouflage effect. This characteristic has allowed unscrupulous dealers to manufacture first model *WH-Heer* camouflage smocks from BGS *Zeltbahn* cloth. These counterfeits can be readily detected, however, due to the fact that the World War II smocks employed a herringbone twill linen material.

In addition to the *Zeltbahn*, a reversible camouflage suit was also produced in BGS splinter pattern. The jacket was of pullover design, closed down the front with both zipper and buttons. It had four pockets on the winter-white side, and the same on the splinter side plus an additional first aid pocket. These suits are very rare today, and were probably never manufactured in such large quantities as the later BGS *Sumpfmuster* suits. The author has seen only three examples of this uniform; the one illustrated here was discovered in a bale of discarded *BGS-Sumpfmuster* uniforms turned in for property disposal. At some time in the mid-1960s the *BGS-Splintermuster* was superseded by a tan-based *Sumpfmuster* pattern, also very reminiscent of that used by the *Wehrmacht*.



Comparison of *Zeltbahnen* in the BGS (left) and *Wehrmacht* (right) splinter patterns, the BGS example with a corner turned to expose the white side for snow

camouflage. The *BGS-Splinter* version is frequently mistaken for an item of *Bundeswehr* equipment; but in fact the *Bundeswehr* never adopted a

triangular *Zeltbahn* - the Federal German Army's shelter-poncho was rectangular in shape (and is described in the second volume of this series).



(Left) First model *BGS Tarnanzug*, a very rare suit today: the present writer has only seen three of these jackets during 15 years of collecting in Germany. The small pocket between the jacket skirt cargo pockets is for the first aid dressing. This suit probably dates from the early 1950s, when the BGS was armed with Mauser rifles; wartime steel helmets were originally worn, followed by one of BGS pattern very similar to the *Wehrmacht* Model 1935.

(Below left) Detail view of the neck closure, secured by both bakelite buttons and a zipper. This late 1940s-early 1950s "Ri-Ri" zipper would not be encountered on original wartime German uniforms.



(Below) The suit worn reversed for snow camouflage. Only the first aid dressing pocket is not repeated on the white side.

POST-WAR: BUNDESWEHR- SPLITTERMUSTER

The Federal German *Bundeswehr*, formed in 1956, was issued a splinter-pattern *Kampfanzug* (battle suit) the same year. The pattern was obviously inspired by the traditional German Army splinter camouflage which first saw use in 1931. However, the "BW-Splitter" pattern can readily be distinguished from any other splinter pattern by the curious way the printing screens seem to have been deliberately slipped, leaving distinct unprinted white borders in some areas of the camouflage splinters. These garments are too well made for this to be a printing error, unlike the similar white bordering - due in fact to printing errors - found in some wartime German camouflage clothing.

There are two distinct variants of the BW splinter pattern, differentiated by the overprinted "raindrops" element. On the most common version, these lines are very narrow and greyish-green in colour. Much scarcer are the garments in which the "raindrops" are both broader, and coloured black.

Two patterns of suits were issued. Most common was the version in which the jacket had four large pockets with pebble-finish snap buttons; this was worn by virtually all branches of the Army including armoured vehicle crewmen.

Only paratroopers wore a different version, distinguished by upper zippered pockets slightly reminiscent of those in the wartime "*Knochensack*", as well as additional pairs of pockets on the rear skirt and on the sleeves. Apparently less than 1,000 of these uniforms were produced for the *Bundeswehr's* then single parachute battalion, making this perhaps the rarest of all regular issue German camouflage garments.

The BW splinter uniform was short-lived, disappearing in the early 1960s. This may have been due to the great influence of the US Army on the *Bundeswehr*; the former did not wear camouflage uniforms in Europe until the late 1970s. (Curiously, it was at that time that the *Bundeswehr* began experimenting once more with camouflage clothing.) The BW splinter uniform never disappeared entirely, however. Like their American counterparts, the *Bundeswehr* retained a camouflage helmet cover in use to some extent. The detachable hoods of the old splinter uniforms were commonly converted into helmet covers, and are still occasionally seen worn by older career soldiers.

(Top right) The standard camouflage combat uniform of the *Bundeswehr* from 1956 until the early 1960s.

(Right) This photo illustrates the two distinct variations in the camouflage scheme of the 1956 *Bundeswehr Tarnanzug*. On the

left is the more common version with thin grey "raindrops"; on the right, the less frequently seen type with broad black lines. The two trouser variations can also be distinguished here by the pocket detail - only the paratroopers' version, right, had zippered pockets.



(Below) Rear view of the parachutists' uniform. The cargo pockets on the rear jacket skirt are another distinguishing feature absent from the general issue version.

(Below right) Detail of a metal "Ri-Ri" zipper of mid-1950s production, a type that should not be encountered on original World War II uniforms.

(Right & far right) The airborne forces' version of the 1956 *Bundeswehr Tarnanzug*. Helmet covers were occasionally made from the detachable jacket hood; here one covers an early *Bundeswehr* copy of the wartime *Fallschirmjäger Stahlhelm*. Note the zippered chest and sleeve pockets, unique to the parachutists' jacket. In the absence of epaulettes the normal slip-on style rank insignia are sewn instead to the upper sleeve.



POST-WAR: FOREIGN "SPLINTER" PATTERNS

Since the end of World War II, several foreign nations have adopted splinter camouflage patterns inspired by those manufactured for the German forces.

The earliest use can be attributed to the **Swiss**, who copied the German *Zeltbahn 31* splinter pattern so closely that it is possible that it could actually have been manufactured in Germany, as was so much Swiss war material. Though the material may be identical, however, not so the object itself: unlike the triangular German *Zeltbahn* the Swiss version was rectangular, and much like the German shelter section of World War I and the *Reichswehr* years. Its official designation was the *Zelteinheiten 1901*. This remained the standard Swiss shelter/poncho until 1955, when a new design appeared which was printed in a pattern inspired by the last German pattern of World War II, the *Liebermuster 45* (which will be discussed in the second volume).

With the exception of a helmet cover, no other item of Swiss military uniform appears to have been manufactured in a German-inspired splinter pattern.

Another country which adopted combat clothing in a splinter pattern similar to Germany was **Poland**. These suits were non-reversible, and are readily distinguishable from German patterns by two features. Firstly, the *Strich* or "raindrops" on the Polish version cover the entire surface, whereas the German type has only intermittent patches of this element. Secondly, the ground colour of the Polish pattern is a straw yellow, a colour never known to be used as the background of wartime German splinter-type camouflage (though it sometimes had a tan base).

From about 1960 to the present, the **Bulgarian** Army has used a splinter pattern similar to that of the *Wehrmacht*. Like the German original it incorporates green and brown splinters on a greyish-green background. Here the similarity ends, for instead of short, straight "raindrops" the Bulgarian pattern features somewhat longer, wavy lines.

The **Swedish** Army currently wears a splinter-pattern uniform, but as this does not utilize the characteristic German *Strich* element it is beyond the scope of this work.



(Top) Splinter side of the Swiss helmet cover, discontinued in 1955 when a version of the German 1945 *Liebermuster* pattern was introduced. This cover is reversible to a pattern similar to the German *Sumpfmuster* discussed in the next chapter.

(Above) Although the camouflage pattern adopted for the Swiss *Zelteinheiten 1901* in the late 1930s is nearly identical to that of the German *Zeltbahn 31* it can easily be distinguished by the peculiar way the green "splinters" are interconnected by thin bands of the same colour. This purely Swiss characteristic never occurs in the German splinter camouflage materials.

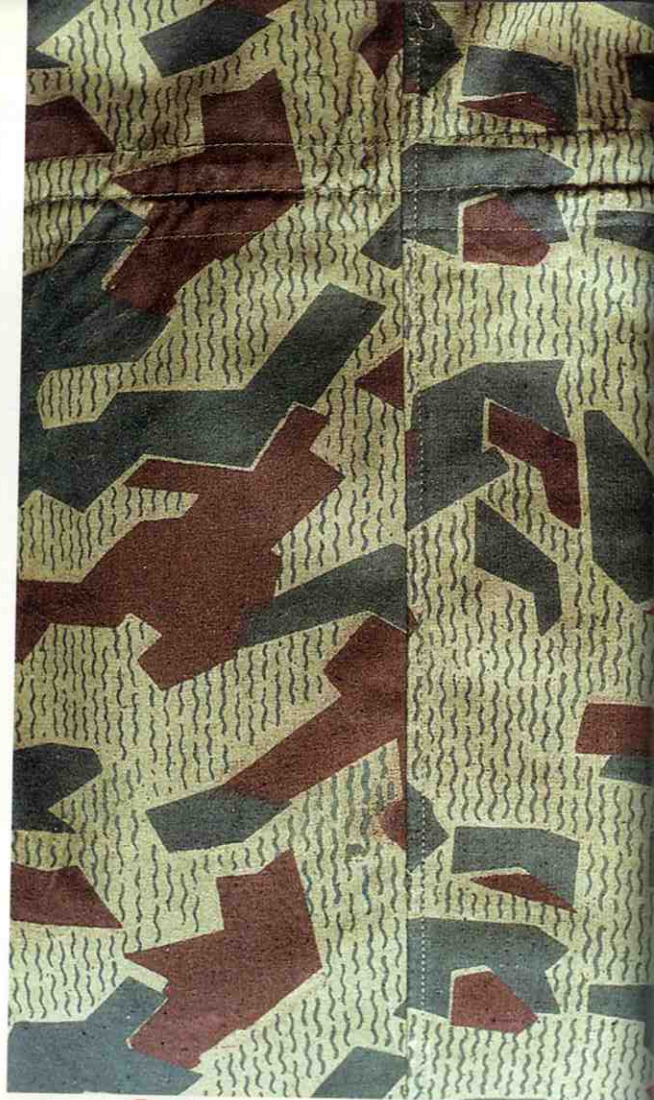


(Left) Comparison of buttons and buttonholes on the rectangular Swiss *Zelteinheiten 1901* (left) and the triangular German *Zeltbahn 31* (right). German buttons are usually zinc-plated iron, while Swiss buttons are aluminium.

(Below left) Polish splinter pattern camouflage uniform used during the 1950s and early 1960s, when it was superseded by a uniform in which all of the splinter patterning was eliminated, leaving only the "raindrops".

(Below) Detail of Polish splinter pattern. Besides the unusual colours, this pattern can be distinguished from the German by the application of the "raindrop" effect over the entire pattern.





WEHRMACHTS-SUMPFMUSTER 43 & 44

Possibly in late 1942, though more probably in early 1943, the *Wehrmacht* introduced another distinct camouflage pattern. It retained both the *Strich* and *Splitter* elements of the earlier pattern; but the edges of the splinter elements were burred or softened so as not to present as sharp a contrast as in the original *Heeres-Splittermuster*. This pattern has commonly been called "tan and water" by English-speaking commentators; this is ambiguous, when one considers that many garments in this pattern have absolutely no "tan" in the coloration at all, but rather a greyish green background like the original *Zeltbahn*.

By 1944, some manufacturers deleted the splinter elements from the pattern altogether, leaving, besides the usual "raindrops", only mottled blotches of brown and green on the tan or grey-green background.

Collectively, all these variants are generally known in Germany as the "*Sumpfmuster*", which literally translates to "marsh pattern". There are several slight variations on the described patterns, probably based more on the artistic license and production capabilities of individual manufacturers than on any intent to produce specifically different types of patterns. Despite this, previous writer-collectors on this subject have attempted to classify each variation with a letter or number, often with contradictory results.

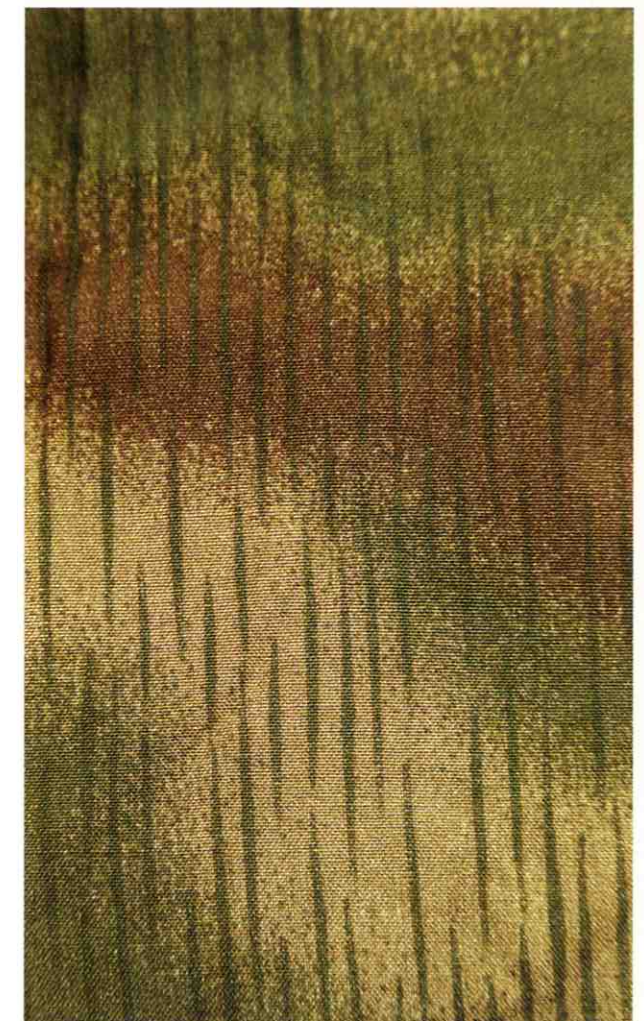
Based upon the present writer's own observations and collecting experience, and upon the guidance of German camouflage collectors, historians and veterans, there is a logical way to describe every major pattern variant without the need of a guide book and lettering code, and it is thus:

The earliest patterns, which clearly retain a burred or feathered splinter design, would be classified as "*Sumpfmuster-43*", as this was most likely the year of its appearance. Further clarification would be to define the garment's base colour, as either "*grüne Sumpfmuster*" or "*beige Sumpfmuster*" depending on whether the background colour was grey-green or tan.

For those late issue garments in which the splinter effect cannot be discerned at all, we would use the term "*Sumpfmuster-44*", since no example of this pattern has been located which was dated before 1944; again, the "green" and "beige" prefixes could be added for a complete description.

(Above right) Detail showing a typical example of the *Sumpfmuster-43* camouflage pattern. The splinter effect can still be seen, and corresponds closely to the original pattern used for the *Zeltbahn* 31.

(Right) Detail showing a typical example of the *Sumpfmuster-44* pattern. By now all traces of the angular splinter effect have vanished, leaving in their places only irregular blotches of the same green and brown colours.



(Top left) Bulgarian one-piece camouflage coverall and cap in a pattern inspired by the wartime German splinter scheme. A number of different garments are made in this pattern, including pullover shirts, two-piece summer and two-piece padded winter uniforms.

(Top right) Detail of Bulgarian splinter pattern. Uniforms in this distinctive pattern appear to have been exported to Soviet-backed Afghan forces, and more recently to Serbia.

(Left) Splinter pattern shelter half, possibly of French origin to judge by the words "*Equipements Militaire*" inscribed on the buttons. It is probable that at least one wartime manufacturer of the *Zeltbahn* was located in German-occupied France, and these were perhaps made using the old German printing screens, but with only two colours on each side.



There is one additional variant that should be mentioned. This is a variation of the *Sumpfmuster-43* which occurs only on some (not all) *Luftwaffe* parachutist's smocks and Field Division jackets. Apparently, the existing *Luftwaffe-Splitter* printing rollers were modified to print the new burred-edge *Sumpfmuster*, thus creating another pattern unique only to some examples of these specialized Air Force garments. A terminology for this variant pattern would simply be *Luftwaffe-Sumpfmuster*.

The *Sumpfmuster* family of patterns were used in more different types of regulation military garments than any other pattern used by German armed forces, wartime or post-war. It may have been originally developed by the *Luftwaffe* for its paratroopers and field troops, though it is most commonly seen as the pattern used by both Army and Air Force for the *Wintertarnanzug*, of both reversible and non-reversible types (see description of this four-piece ensemble in the *Heeres-Splittermuster* chapter).

Garments originally manufactured in Army and Air Force splinter patterns were all eventually superseded by one or more of the *Sumpfmuster* variants; the only notable exception was the *Zeltbahn 31*, which continued to be produced in the Army splinter pattern until the end of the war.

In Army service, the splinter pattern *Tarnhemd* (collarless camouflage smock) was replaced by a slightly different model with an integral hood, first in the original "burred splinter" *Sumpfmuster-43* variation, and finally in the *Sumpfmuster-44*. These are found with both the tan and grey-green base colours, though the latter version is considerably rarer. Factory-issue matching trousers also exist, and were apparently issued as a set with the hooded *Tarnhemd*; however, these are extremely rare, and were probably only issued to snipers.

The *Sumpfmuster-43* and *44* patterns seem to have been used exclusively in the camouflaged *Gasschutzanzug*, or chemical warfare protective suit. These suits were originally produced in a medium grey colour with a natural black rubber interior. The later suits, probably manufactured in 1944, occur in both *Sumpfmuster* patterns, employing the same lightweight cloth as the hooded *Tarnhemd*, but with natural black india-rubber permanently vulcanized to the inside surfaces. The protective ensemble was an extraordinarily complicated seven-piece set which completely encased the wearer to protect him from the new chemical nerve agents first developed by Germany. (Unlike the chemical agents of World War I, these nerve agents could be instantly lethal if absorbed through the skin, hence the need for total protection. Why the Germans never used these nerve agents is something of a mystery; it was probably decided that any advantage would be short-lived before the Allies reciprocated in kind.)

Theoretically these suits could also have been manufactured in SS camouflage cloth, but no surviving examples are known; even in the *Wehrmacht-Sumpfmuster* very few of these suits were ever made, and it remains one of the rarest of all World War II German camouflage garments.

Apparently, the last regular issue camouflage uniform of



(Left) Comparison of the "green" (left) and "beige" (right) colour variations of the *Sumpfmuster-43* pattern in the *Wintertarnanzug*. The trousers of the soldier on the right are a peculiar pattern variation which is based on neither the original *Heer* nor the *Luftwaffe* splinter.

It is unclear which were the first garments to appear in the new "marsh pattern"; a good guess would be the *Wintertarnanzug*, which was the most widely produced garment in this pattern. It is possible that the earliest suits are those printed in the *grüne Sumpfmuster*, like this jacket. This makes sense if we look at this as an evolutionary development, with

the first stage being the burring of the sharp splinter edges, but retaining the grey-green *feldgrau* base colour of the old splinter pattern. Both the *Wintertarnanzug* and the *Heeres Tarnhemd* are found printed with the grey-green base, making the term "tan and water pattern" something of a misnomer for this family of patterns as a whole.

the *Wehrmacht* was inspired by the M1944 two-pocket blouse, which in turn was inspired by the British battledress blouse. Examples of this uniform in the *Liebmuster-45* camouflage pattern have recently turned up on the collector's market; though this uniform was intended for use by both the *Wehrmacht* and the *Waffen-SS*, it will be featured in our second volume since the pattern has more SS attributes.

However, at least one absolutely genuine jacket of this short, two-pocket M1944 type has survived in *Sumpfmuster-44*. I can attest fully to its authenticity,

(Right) Detail of the non-standard pattern trousers in the previous photograph. It is possible that the manufacturer did not already have the rollers for printing *Heer*- or *Luftwaffe-Splittermuster* for modifying to print the *Sumpfmuster*, so merely designed a similar pattern of his own.

since it was purchased for a very nominal price from a Turkish used-clothing dealer at the Frankfurt flea market, some years before the nearly identically cut M1944-style *Liebmuster* jackets appeared on the scene. Although I know of no original wartime photographs which show either the *Sumpfmuster* or *Liebmuster* versions of this M1944-style blouse, from this inexpensive flea market find I am at least convinced that it existed in the former pattern, and therefore reasonably sure that at least some of the *Liebmuster* versions are likewise authentic.





(Left) Detail of manufacturer's markings on the inside fly area of the variant *Sumpfmuster*. These are quite full, including the *Reichsbetriebsnummer* coding, the Roman numeral "II" indicating size, and "44" for the year of manufacture. The "M.L." may be a manufacturer's reference. There is no evidence to indicate this is a special experimental pattern as suggested in some texts, though it is very rare, and probably the product of a small manufactory.



(Left) The usual placement for size and manufacturers' markings on the jacket of the *Wintertarnanzug* was underneath the windflap of the front closure. On this rare *feldgrau*-ground jacket the only discernible mark is a *Reichsbetriebsnummer*.



(Below left) On this more common beige/ tan-based jacket the only marking is the "2" indicating size ("1" being the smallest). It may be no coincidence that the general regulation of February 1943 which ordered all German military equipment to be painted in a tan base colour roughly coincided with the adoption of the tan background for most *Sumpfmuster*-43 and *Sumpfmuster*-44 pattern suits.

(Right) The two soldiers carrying a box of four *Panzerfaust* 60s display different though similar patterns on their winter camouflage uniforms. The man in the foreground wears a suit of the later production *Sumpfmuster*-44. The jacket appears to lack a hood, but in fact - being unpadded - it is tucked down inside. The background soldier wears the more common *Sumpfmuster*-43 suit, with his jacket hood up; it was made large enough to fit easily over the helmet.





(Left & below) Although this particular uniform is manufactured from *Wehrmacht-Sumpfmuster* cloth, the snow camouflage side is common to all reversible *Wintertarnanzügen*, including those of the *Waffen-SS* (discussed in the second volume).



(Right) Not all of the padded winter camouflage suits, in either *Splittermuster* or *Sumpfmuster* schemes, were manufactured to be reversible to white; many examples are found which are designed to be worn only with the camouflage-printed side out. The outside of the uniform is of identical cut to the reversible versions, and the inside is lined in a grey or blue-grey artificial silk (spun rayon) material. There is no evidence to suggest that these were issued exclusively to *Luftwaffe* troops, as is sometimes supposed due to the bluish lining. More likely, because the white side of the reversible uniform became soiled easily and its padded construction made it hard to clean, it was more practical to wear thin one- or two-piece white over-garments on top of it. This would suggest that this may be the last version of the suit. (Interestingly, the *Waffen-SS* continued to produce their winter suit exclusively in the reversible style.)



(Left) Late-manufacture mittens of the *Wintertarnanzug* ensemble were sometimes made with a separate trigger finger, for improved ease in handling weapons. There is no evidence for the claim, sometimes made by dealers, that these were specifically issued to snipers.



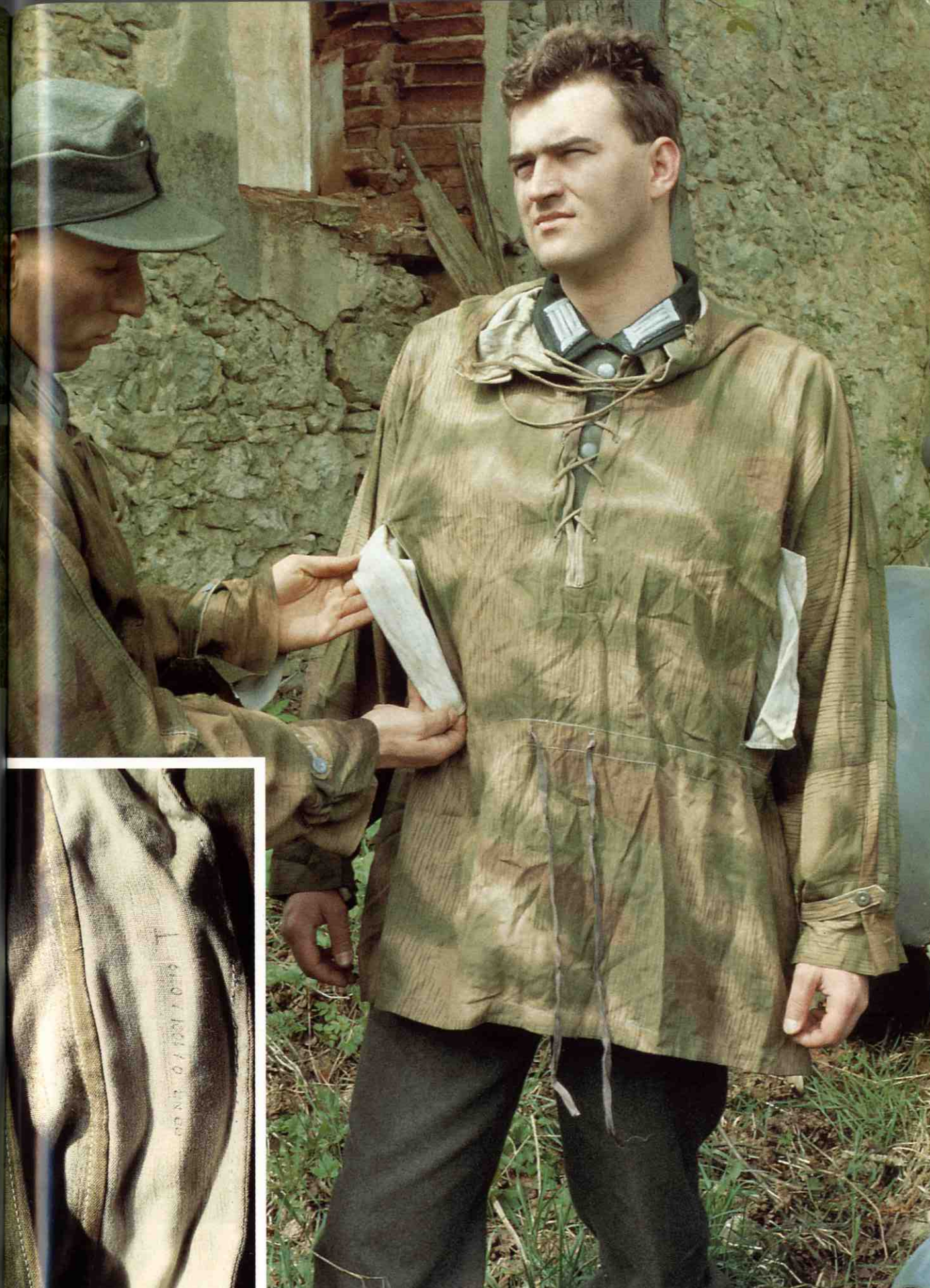
(Right) Manufacturer's stamp on a pair of reversible *Wintertarnanzug* trousers in "marsh pattern". German camouflage uniforms were manufactured throughout the occupied territories and some degree of variation is naturally found, given inevitably varying manufacturing techniques and equipment. This garment was manufactured in Antwerp, Belgium.





(Above & left) Two versions of the second type *Heeres-Tarnhemd*, basically identical except for the cloth pattern. The enlisted man (at right in both photos) wears an example printed in *Sumpfmuster-43*, and has tucked his hood down inside the back of the neck giving a misleading collarless effect. The officer (left) wears a smock in *Sumpfmuster-44*, and has his hood exposed. Like that on the winter jacket, this was cut large enough to cover the helmet, theoretically eliminating the need for a separate helmet cover - although an experienced infantryman would always prefer a separate cover, to avoid a hood's disadvantages of hearing and peripheral vision.

(Right & inset) Details of the second model *Tarnhemd*. Like the first model in *Heeres-Splittmuster*, these smocks had a drawstring waist and button cuffs. Manufacturer's markings (usually only the size, here "I", and a *Reichsbetriebsnummer*) were printed inside the breast pocket-access flap opening.





(Left) The rarest version of the second type *Heeres-Tarnhemd* was printed on a grey-green background instead of the more usual tan. This example has had its hood removed, perhaps to "field-rig" a helmet cover; and note the interesting non-standard elaticated cuffs in *Waffen-SS* style.



(Right) The parachutist's jump smock in the *Luftwaffe Sumpfmuster*, a special pattern which seems to have been created by modifying the printing rollers originally used to print the Air Force splinter pattern. It is manufactured from a double faced twill cotton/rayon blend offering excellent wind resistance. Note the characteristic jump smock pocket details; and the skirt fastened into separate "legs" by press studs.

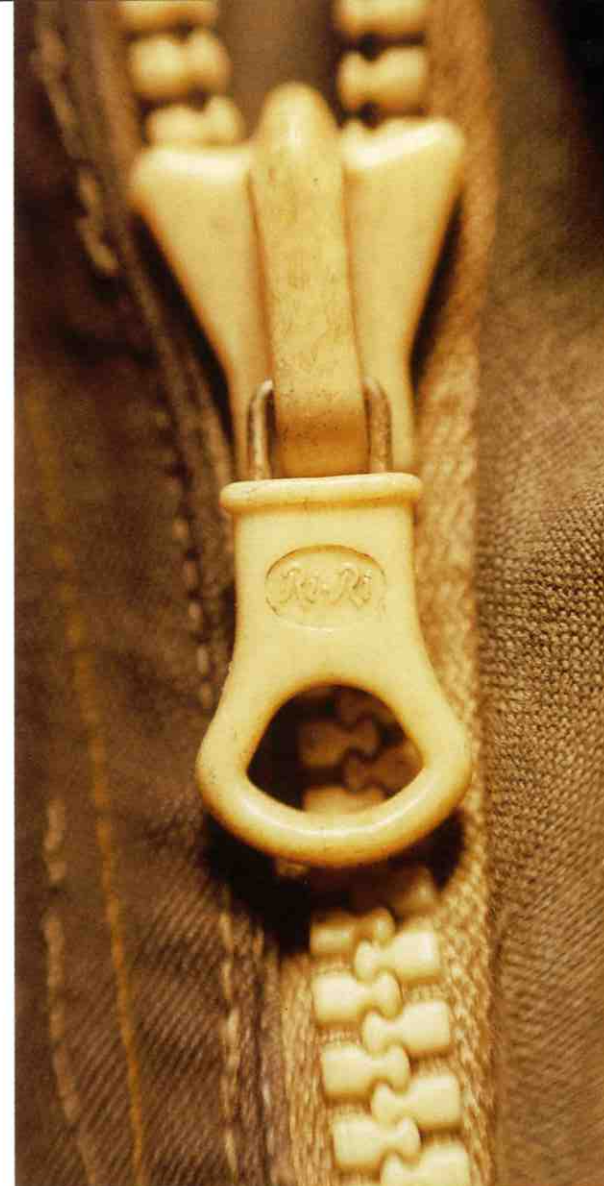


(Above & right) Parachutist's "bone sack" printed in the normal *Wehrmachts-Sumpfmuster* pattern seen on the winter suit and Army camouflage smock. This *Fallschirmjäger* is dressed for action in Tunisia and Sicily, 1943, with sand-coloured helmet and *Luftwaffe* tropical trousers. This mid-war production jump smock is still made of a predominantly cotton (33% rayon) blend and weave identical to that employed in the *Zeltbahn*.



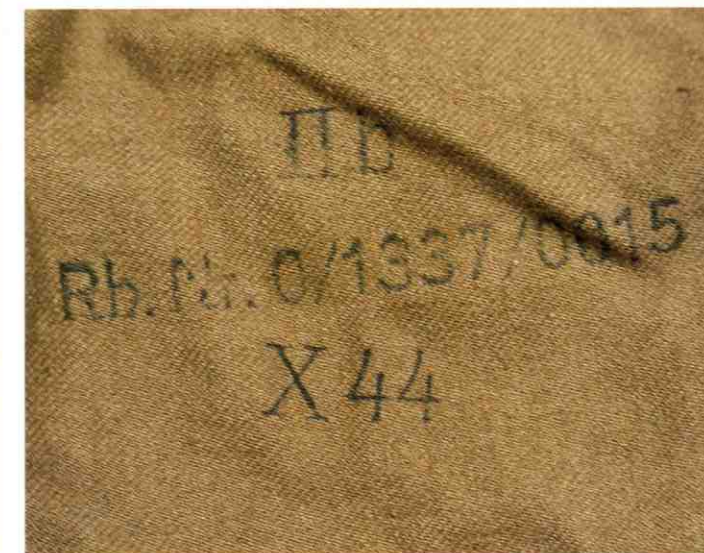
(Below) The lining of the smock worn by our paratrooper in Sicily is of natural undyed linen, stamped with the RB number, and an Arabic "2" followed by a "B", indicating the size. The glass buttons on this example are a darker shade of blue than most.





(Left) Another zipper style, this time of an early nylon material, used in some mid-to-late war parachutist's jump smocks and camouflage grenade bags. Similar zippers are still being made by the original manufacturer, and are sometimes employed in counterfeit uniforms.

(Below) Interior detail of the late-issue lightweight synthetic fibre jump smock printed in *Sumpfmuster-44* (below). The Roman numeral "II" is probably the size, and the "b" may stand for the German word *breit* indicating a broad fitting. The garment is basically unlined, save for the backing of the large zippered cargo pockets; these appear to have been made from a khaki cotton twill, perhaps factory scrap left over from making tropical clothing.



(Top left & right) Detail of the zipper style on the illustrated "Knochensack": one of the most common wartime makes, marked "Zipp" on the front surface of the pull, and "D.R.P." (for *Deutsches Reich Patent* - a confirmation of wartime manufacture) on the reverse.

(Left) Detail of right rear panel of a mid-war jump smock in *Sumpfmuster*, showing the buttoned fastening of the flare pistol holster, tightening snap, and holes for the metal belt support hooks. The well-used snap has lost its green-grey baked enamel finish, leaving the brass exposed.

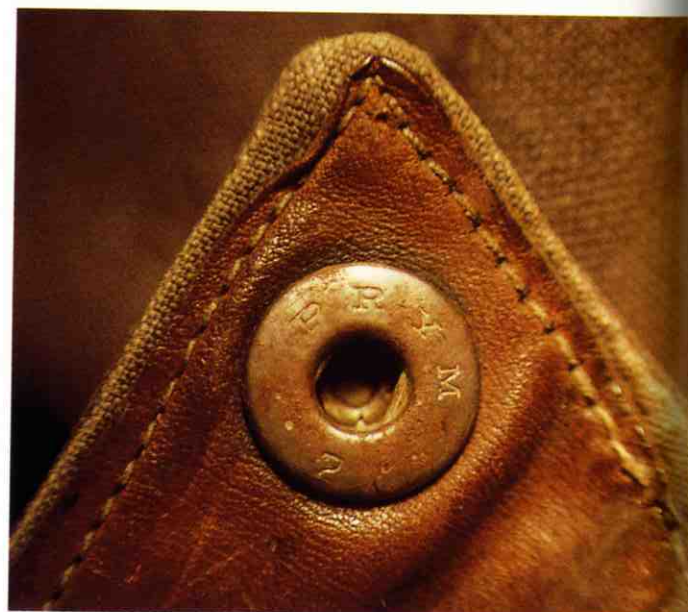


(Left) A late-war jump smock dated 1944. By this time the "bone sack" was made entirely of spun rayon synthetics, in the same weave and light weight as the second model *Heeres-Tarnhemd* and the outer shell of the *Wintertarnanzug*. This example is printed in the late *Sumpfmuster-44* without any trace of splinter effect. The *Soldbuch* is being removed from one of the four zippered pockets common to all versions of the *Luftwaffe* jump smock.



(Above) Detail of yet another type of original jump smock zipper, this one marked "RAPID", on the 1944-dated *Sumpfmuster-44* garment. This example uses dished metal buttons instead of the more typical blue glass or plastic type.

(Below) Detail of typical press stud used in most original examples of jump smock and first model *Luftwaffe* Field Division jacket. The word "PRYM" is the manufacturer, while the "6" indicates the size (6mm). Many fakes are betrayed by the use of post-war press studs, which are still manufactured by PRYM: ironically, the post-war studs are marked "ORIGINAL PRYM"...



(Right) Detail of another original wartime PRYM snap stud, this time a "number 7". The number 6 is the most commonly encountered on camouflage clothing, though both smaller and larger ones are occasionally employed, as are those from other manufacturers. Original snaps do not necessarily guarantee an original garment: particularly devious counterfeiters will often remove original snaps from common items like gas sheet cases, for re-use on high-priced forgeries.

(Right) One of the rarest of all wartime camouflage garments is the *Gasschutzanzug* in *Sumpfmuster* scheme (it is reasonably common in plain grey colour). This example has a helmet cape, upper torso and gloves in one style of *Sumpfmuster-43*, the "apron" section in a slightly different variant, and legs in *Sumpfmuster-44*. The reason this suit came in so many parts was to make removal easier should it become contaminated with chemical nerve agent.





(Above) Detail of the high rubberized "boots" of the Gasschutzanzug. Webbing straps are shown in a wartime manual bound around the boots (see photo on page 45).



(Top right) The "apron" section must be stepped into like a pair of trousers, after donning the leggings and torso cape.



(Right) Fastening the "apron".



(Left) Detail of one of the cardboard "buttons" used to secure the webbing straps of the Gasschutzanzug.



(Right) Detail of helmet with attached rubberized cape to protect the rest of the head not covered by the gas mask. The cape may be tied under the chin.



(Left & above) One of the rarest of all German wartime camouflage garments is this short M1944-style blouse made from herringbone twill linen in *Sumpfmuster-44* pattern. The present writer did not even know of this jacket's existence until the example illustrated was purchased from a Frankfurt flea

market rag dealer. It bears a very close resemblance to the M1944-style *Liebmuster* jackets, which will be described in the second volume. Note in the rear view the unusual feature of two sets of foliage loops, very similar to those used on the second model *SS-Tarnhemd*.

(Right) The *Heeres Tarnungs Körper-Schurze* (Army camouflage apron) in *Sumpfmuster-43* pattern. This was apparently a last-ditch attempt to provide a camouflage garment requiring the minimum amount of manufacturing.

(Below) Detail showing the late-style uniform buttons as used on the short *Sumpfmuster* blouse. The herringbone twill weave can also be seen.





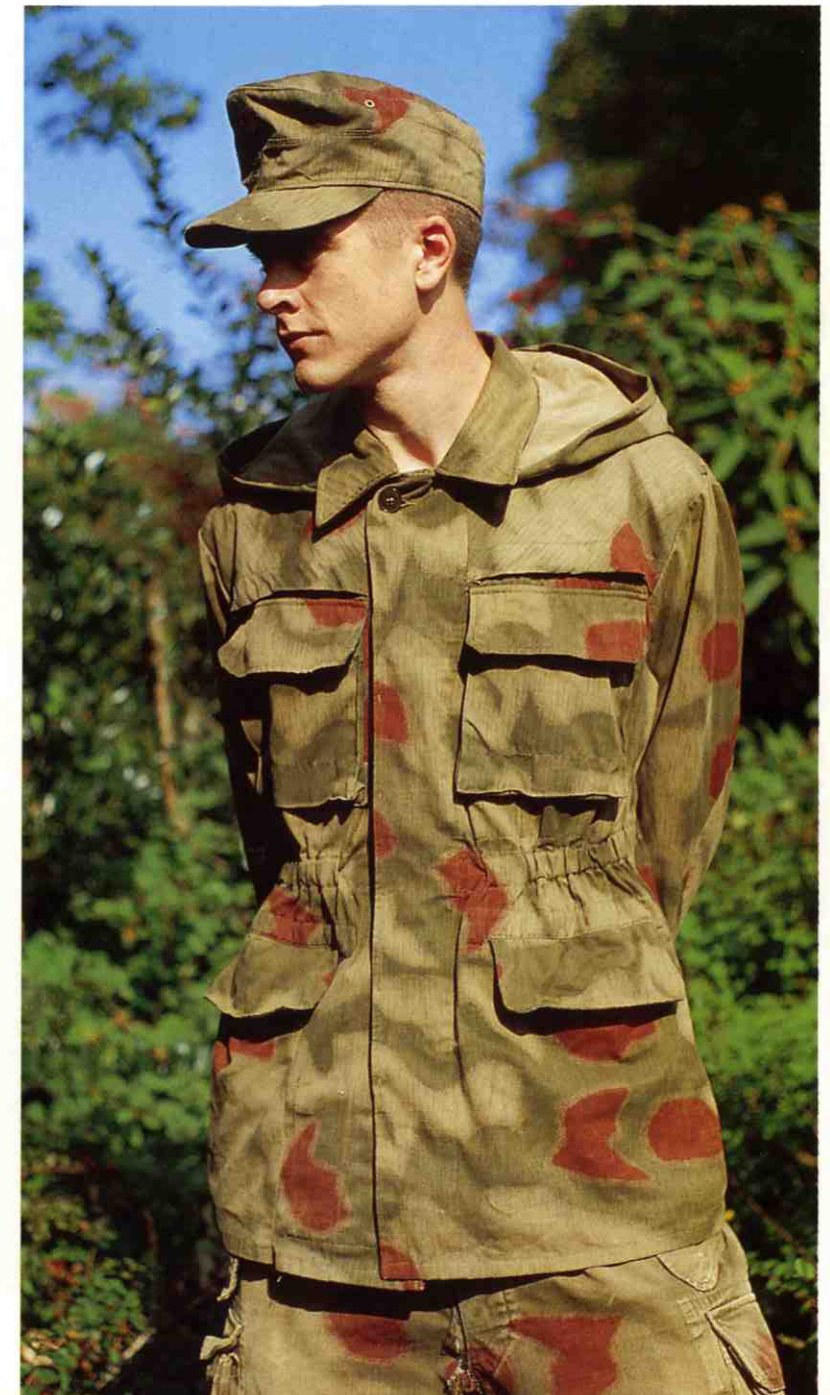
POST-WAR: BUNDESGRENZSCHUTZ-SUMPFMUSTER

At some time apparently in the early 1960s the *Bundesgrenzschutz* border police replaced their splinter pattern camouflage suit and *Zeltbahn* with a new pattern based on the *Wehrmacht*'s old *Sumpfmuster* scheme. The jackets of the earliest suits were of pullover *Tarnhemd* cut, nearly identical to the earlier splinter version but without the capability of reversing to white. These were superseded by two variations of a more conventional jacket; and a three-quarter-length parka similar in design to the plain grey-olive model issued to the *Bundeswehr*. The later issue jackets and parkas of the BGS can be identified by a pen pocket on the right upper sleeve which bears the *Bundesgrenzschutz* insignia. Nylon rain gear in the same pattern is also issued.

Some of the best early fake *Wehrmacht* camouflage uniforms have been made from this BGS material, most notably helmet covers, *Luftwaffe* Field Division jackets and paratrooper smocks. The best method of detection is carefully to compare a sample of BGS material with that used in the suspect garment, and to check zipper and press stud details illustrated in

relevant chapters of this book.

This BGS marsh pattern has become extremely popular, and is employed for a variety of garments and equipment items produced for both the export military and private commercial/collector markets. Equipment includes sleeping bags; and a *Zeltbahn* - note that there is no evidence for this item ever being manufactured in *Sumpfmuster* during the war years. Libya is one example of a military export customer, and has equipped some of its army in uniforms made of the BGS pattern cloth.



(Left) The earliest BGS *Sumpfmuster* suit with pullover jacket. It is basically a copy of the BGS splinter pattern suit but without the capability to reverse to white. Note, again, the field dressing pocket in the front of the skirt.

(Right) The second model BGS *Sumpfmuster* jacket was a conventional front-buttoning garment with a "caped" back to provide ventilation. A third model added a pen pocket on the upper right sleeve.



(Above) The BGS *Sumpfmuster* parka. Pile-lined, it is very similar in design to the contemporary olive-grey parka of the *Bundeswehr*.

(Below) The rubberized nylon sleeveless rain garment in the BGS *Sumpfmuster* pattern. This is reminiscent of the late wartime *ersatz* camouflage apron in the *Wehrmacht-Sumpfmuster* pattern.



POST-WAR: FOREIGN "MARSH" PATTERNS

Several countries have adopted camouflage patterns which contain design elements similar to those of the wartime *Wehrmacht-Sumpfmuster*. All (except the Swiss) retained the characteristic German *Strich*, "raindrops", but are differentiated from foreign splinter patterns by irregular blotches instead of geometric "splinters".

Most similar to the German is the **Czech** pattern first used in the late 1940s/early 1950s for a shelter section/poncho; this is virtually identical to some versions of the German *Sumpfmuster-43*, and in all probability was printed using original wartime German rollers. (Interestingly, these same Czech shelter/ponchos are also known in wartime Italian camouflage pattern.) The author is unaware of the German-style camouflage being employed for other items of Czech issue.

This pattern was followed by another in *Sumpfmuster* style used from the 1950s for a special paratroopers' combat uniform. It can easily be distinguished from German material by its use of a fourth colour in the camouflage scheme instead of the basic German three. A similar, second version of this camouflage was used exclusively for a shelter tent/poncho; it is distinguished by having some areas deliberately left unprinted, adding small areas of

white to the camouflage in what is thus a five-colour pattern.

The Czech army developed another version of the *Sumpfmuster* in the mid-1960s to replace their very colourful, predominantly black and yellow "salamander" pattern (not illustrated). There are two distinct versions of this new pattern: one in which the blotches are very distinct, and a second in which they are nearly invisible. The former is illustrated in this chapter, and the latter in that on foreign "raindrop" patterns, since the virtual invisibility of the blotches make it essentially a "lined" rather than a "marsh" pattern. Only two colours are used in this pattern: dark green-grey circles and blotches are applied over a lighter grey-green ground.

The **Bulgarian** *Sumpfmuster* is more of a copy of the Czech pattern than of the original German scheme; however, it is included here since this is a survey of all patterns based on wartime German camouflage. The Bulgarian pattern is used exclusively by border guards, the regular army using the Bulgarian version of the splinter pattern discussed in an earlier chapter.

The **Austrian** Army also adopted a type of *Sumpfmuster*, which was apparently used exclusively for one side of a poncho/shelter almost identical in construction to the German *Zeltbahn 31*.





(Above) This special uniform for General Officers was introduced in 1975, and has features also seen in the second version of the regular issue *Felddienstanzug* from around this date, most notably the addition of a pair of slash pockets in the jacket skirt. The main difference between the Generals' version and the regular issue was the lack of jacket sleeve and trouser cargo pockets. This particular example can be dated to the late 1980s by the addition of the new rank insignia which are buttoned to the sleeve, and the "baseball"-style cap which replaced the *Feldmutze*.



(Above right) The second model FDA for paratroopers, lacking the foliage loops seen on the previous model, and with the trousers now tailored to be worn inside the combat boot. The weapon is the East German version of the Soviet AKMS, designated the MPi- KMS-72.



(Right) Detail of the special knife pocket on the trousers of both first and second models of the paratrooper uniform. The lower portion of the fighting vest can also be seen.



(Far left & left) This fully-equipped paratrooper appears to be wearing a different, pocketed jacket, but in fact wears over his jacket the second model of the special load-carrying vest. Also seen is the grey field service beret worn in lieu of the plastic jump helmet. The side view shows equipment such as the back pack and water bottle carrier also in the *Strichmuster* camouflage. Slung over his shoulder is the Soviet-designed RPG-18, a copy of the American LAW. The new rank insignia on the sleeve identify this as a late-production uniform.



(Previous page & left) The first camouflage pattern developed for the Czechoslovakian Army after World War II, but apparently limited to use on the shelter tent/poncho, was closely based on German wartime *Sumpfmuster*-43 and may have been printed with the original rollers, though not on the same material.

(Right) The "five-colour" Czech *Sumpfmuster* used only for this shelter tent/poncho, distinguished by small areas deliberately left unprinted white. After World War II the countries of occupied Eastern Europe adopted Russian-style uniforms and equipment, and this item is no exception. It is worn by pulling a drawstring to form a hood, as was the Russian model on which it was based.

(Bottom right) Czech paratrooper armed with the RPG-7 anti-tank weapon and wearing the Czech two-colour *Sumpfmuster* uniform of the 1960s, which is now obsolete.

(Below left & right) Special uniform for paratroopers in the second, four-colour Czech *Sumpfmuster* variant from the early 1950s. The "fourth" colour, absent from the German original, is black or very dark green.





(Left) The close-up of the pattern worn by the Czech paratrooper demonstrates that this is not, as has been suggested, a "faded out" version of the more common Czech *Strichmuster* in which the blotches are nearly invisible; it was deliberately printed this way.

(Below left & right) The one-piece Bulgarian *Sumpfmuster* coverall issued to border guards; he is armed with a Bulgarian-made version of the Soviet AKMS assault rifle.



(Left) This Swiss helmet cover pattern lacks the characteristic German "raindrop" element found in every other pattern in this book; it is included here for the guidance of collectors, since it looks very similar to wartime German *Sumpfmuster* without the *Strich* lines. This is the reverse side of the splinter pattern helmet cover illustrated earlier. This pattern does not seem ever to have been used for anything other than helmet covers.

(Below) Austrian version of the German *Zeltbahn 31*, with one side printed in the familiar Austrian camouflage uniform pattern and the other in an interesting version of a *Sumpfmuster*.



POST-WAR: DDR-STRICHMUSTER

This, the last camouflage pattern of the Communist *Deutschen Demokratischen Republik*, could also be considered the final evolution of the venerable German 1931 splinter pattern. This process of change began during World War II, with the splinters first losing their sharp edges and becoming burred, then being replaced by undefined blotches; and finally, in this pattern, the blotches disappearing altogether, to leave only the *Strich* or "raindrop" effect.

The "ein Strich - kein Strich" pattern ("one line - no

line", as it is nicknamed in Germany) was introduced to the East German *Nationale Volksarmee* in 1965, replacing the irregular blotch pattern ("*Flächentarnmuster*", discussed in the second volume of this series). Officially designated the FDA or *Felddienstanzug* (field service uniform), this pattern appears to have been copied directly from the Polish Army, which had adopted it earlier in the 1960s after using a close copy of the *Heeres-Splittermuster* mentioned previously in this book.

The earliest versions of this combat uniform were cut identically to the last uniform printed in the earlier blotch pattern, having two upper breast pockets and pockets on each upper sleeve. There was also a parachutist's version of the uniform which had a knit collar and cuffs, and trousers with padded knee reinforcements and a pocket for a fighting knife. During this time the winter uniform remained a solid light grey colour. A rectangular Russian-style shelter half/poncho was also produced in the *Strich* pattern, as well as a multitude of other equipment such as packs, magazine pouches, etc. In the early 1970s a fighting/load-carrying vest for paratroopers was also produced in the *Strichmuster*.

By the 1970s lower slash pockets had been added to the jacket; and in October 1975 a special General Officer's version of this uniform was issued, replacing a plain grey one previously worn in the field by NVA generals. Also in the 1970s, the formerly solid grey padded, pile-collared winter uniform also appeared in the *Strichmuster*. Finally, some time prior to German reunification in 1989, the uniform changed again, this time having four patch pockets on the front. Obviously inspired by the latest Soviet uniform developed during the Afghan War (which was just as obviously inspired by the American battle dress uniform), these uniforms were kept in war reserve stocks, and do not appear to have been generally issued to or worn by the NVA.

(Left) The first model *Felddienstanzug* for paratroopers. The most obvious differences are the lack of visible breast pockets, and the knit collar and cuffs; it also has thicker padded knee and arm reinforces, and an extra knife pocket on the trousers, which are worn over the boots with this uniform.

(Right) The first model NVA *Felddienstanzug*, this example dated 1966. First model suits are characterized by the lack of lower jacket pockets, by knee and elbow reinforcements, foliage loops on the body and sleeves, and exposed grey plastic pebble-grain buttons on the sleeve and trouser pocket flaps. Shoulder boards were worn; also reminiscent of that period is the *Feldmutze* cap, worn with both field uniform and the everyday woollen service uniform.





(Above & right) The final version of the regular *Felddienstanzug*. The jacket now has four front patch pockets, though they are largely obscured here by field equipment. The sleeve pockets are retained, but the foliage loops have been eliminated. The loop on the arm for the new type rank insignia is standard. The rifle is the MPi-AKS-74N, based on the Soviet AKS-74. Other than the grey nylon webbing, the only equipment item not manufactured in the *Strichmuster* is the grey rubberized bag holding the chemical protective mask.



POST-WAR: FOREIGN “RAINDROP” PATTERNS

Surprisingly, it was **Poland** which first adopted the lined/“raindrop” pattern which is so closely associated with former East Germany’s *Nationale Volksarmee*; and interestingly, once East Germany adopted the near-identical pattern, the Polish abandoned it.

This lined pattern evolved from the Polish splinter pattern, which unlike the German original (which had only random patches of lines) had a uniform “raindrop” overprint covering the entire pattern. With the splinters removed, the two-colour line pattern was born. This pattern seems to have appeared in around 1960; a garment in the present writer’s collection is dated 1962, well before its adoption by East Germany.

The **Czech** lined pattern dates from the mid-1960s, approximately the date when a very similar one was adopted by East Germany. On many uniforms the two patterns appear identical, and only by very close examination can the mottled, irregular underprint of the camouflage scheme be discerned. This is why this version has been included in the lined/“raindrop” section of this book.



Use of the “raindrop” *Strichmuster* was not confined to Communist countries. Because East German camouflage uniforms sometimes found their way to Communist guerrillas in southern Africa, the South African Defence Force had uniforms in the same pattern manufactured locally for counter-insurgency operations.



(Above) The Polish *Strichmuster* uniform. Though dated 1963, this uniform could easily be mistaken for the late 1980s uniform of the East German NVA, which also featured a jacket with four patch pockets on the front.

(Left) Comparison of the Polish (left), and East German (right) *Strichmuster* camouflage patterns.

Glossary of Terms

Since this is a study of German camouflage patterns and uniforms, the writer believes it important to utilize the actual German terms rather than those invented by foreign collectors (though in some cases there is no clear consensus of opinion as to the correct terminology even in Germany).

Bundesgrenzschutz (BGS) The post-war German border police, who had their own unique camouflage uniforms distinct from those of the German Army.

BGS-Splintermuster The earliest camouflage pattern of the Bundesgrenzschutz, based very closely on the wartime German Army splinter pattern.

BGS-Sumpfmuster The second model of border police camouflage, based closely on the *Sumpfmuster-43* pattern of the wartime *Wehrmacht*.

Bundeswehr (BW) The post-war Federal German Army.

BW-Splintermuster Federal German Army camouflage pattern adopted in 1956.

Heer The wartime German Army. The prefix *Heeres* denotes types of camouflage patterns or garments used primarily by the wartime German Army.

Heeres-Splintermuster The earliest German ground forces camouflage pattern, first employed on the Model 31 shelter-poncho or *Zeltbahn*. As this pattern was also used by the Air Force and some Navy ground troops, *Wehrmacht-Splintermuster* is an equally appropriate term.

Knochensack "Bone sack" - German nickname for the jump smock of the wartime German paratrooper.

Luftwaffe The wartime German Air Force.

Luftwaffe-Splintermuster Term for a specific variant of splinter-style camouflage pattern employed only in garments and equipment items intended for use by personnel of the German Air Force.

Luftwaffe-Sumpfmuster Term for a specific variant of "marsh pattern" camouflage created by burring the edges of the *LW-Splintermuster*.

Sumpfmuster-43 "Marsh pattern" - the intermediate *Wehrmacht* pattern between splinter pattern and late marsh pattern, in which the original splinter effect has the sharply contrasting edges burred. The background colour is usually tan, less frequently grey-green.

Sumpfmuster-44 "Late marsh pattern" - a late war *Wehrmacht* camouflage scheme derived from the earlier *Sumpfmuster-43* pattern, in which the green and brown "splinters" have evolved into irregular blotches. The background colour is usually tan, less frequently grey-green.

Tarnhemd "Camouflage shirt" - the German term for the loose-fitting, pullover smock.

Tarnhelmüberzug Camouflage helmet cover.

Wintertarnanzug Winter camouflage suit - the two-piece padded suit first introduced in 1942, and usually, but not always, reversible to white.

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