

infantry platoon leader will be led by the senior (or best) squad leader, and this squad must be maintained at full personnel strength. The armor platoon leader and platoon sergeant will then be in control of the vehicles while the infantry is dismounted. Both the infantry and the armor platoon leaders and sergeants must therefore become thoroughly acquainted

with the attached elements' men, tactics, fire systems capabilities, and maintenance and logistical requirements. To do this, the two platoons obviously must spend a great deal of time training and firing together.

Combining the best of the infantry and armor worlds at platoon level is, at least, one more option a company team com-

mander can consider when looking at the best way to carry out a given mission.

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# Standardize Combat Load

CAPTAIN STEPHEN P. PERKINS

Since early times, the combat load of the infantryman has been a matter of concern to commanders and soldiers alike. Unfortunately, history is replete with examples of commanders loading their soldiers with supplies to meet every contingency.

Before the 1800s this may have been possible, because soldiers were usually picked from society's best physical specimens. During the Napoleonic period, however, the employment of firearms reduced the need for such strength, and the heads of state saw the possibility of even larger armies with better chances of victory. As a result, soldiers of various sizes, normally smaller, ended up carrying excessive loads.

The infantryman learned early, however, that he could not carry every item the upper echelons wanted him to carry. This is especially true of the American "light" infantryman. He has been overburdened because his commanders have wanted him to be not only combat ready but also more comfortable.

But the infantryman has always been willing to accept hardships when he felt it was necessary to conserve energy or to accomplish a mission. As a result, in every conflict in which we have participated, up to and including the 1983 mission in Grenada, our footmobile infantrymen have always discarded the

items they had no immediate or perceived use for.

We have been talking about controlling the soldier's load for a long time. As early as the 1950s, for example, Brigadier General S.L.A. Marshall recognized the need and advocated loading a soldier according to his size, not according to what he wanted to carry. (He saw not only physical attributes but also emotions — especially fear — as limiting factors.)

## STUDIES

Since then, many studies have been conducted on the human anatomy and how it affects military operations. In 1966 the United States Army's Natick Laboratories and the Research Institute of Environmental Medicine concluded that the most economical load for the properly conditioned fighting soldier is 30 percent of his body weight (47 pounds for the average soldier's weight of 156 pounds), and that the maximum load for a marching soldier is 45 percent of his body weight (or 70 pounds for the average soldier).

Although almost everyone agrees that a soldier's load must be lightened, when it comes to deciding what should be left behind, there is an endless variety of opinion and no action.

When elements of the 2d and 3d Battalions of the 325th Airborne Infantry

Regiment conducted a combat air assault onto the Point Salines airfield on the island of Grenada in October 1983, the soldiers in these units were carrying approximately 80 pounds each. This weight, coupled with the initial fear inherent in a combat situation and the different climatic conditions, led to a marked decrease in their combat effectiveness.

In one battalion, each soldier was authorized to carry all the ammunition he could get, although the readiness standing operating procedures (RSOP) dictated that each man have a set amount according to his duty position. (Most platoon members and leaders carried more than one LAW, for example.) In such situations, when the individual soldier is overloaded, he moves more slowly and becomes a better target.

The readiness SOPs of most U.S. divisions call for each soldier to carry the following:

- 210 rounds of 5.56mm ball/tracer ammunition.
- Three days' rations.
- Two one-quart canteens of water.
- One bayonet with scabbard.
- Bundles of clothing.
- As many comfort items as each soldier wants to carry.

Except for the water, all of these amounts are either excessive or are not likely to be used. (A typical RSOP load

is detailed in Table 1.)

Additionally, the following items would follow in the A-Bag: Combat boots, waterproof bag, duffle bag, field cap, cotton drawers, 2 handkerchiefs, mess kit, overshoes, scarf, socks, BDU uniform, wool shirt, wool trousers and towel.

In the immediate future, footmobile (light) infantrymen are most likely to be used in restrictive terrain such as cities, forests, and mountains. They will be able to fight and win in those areas only if they prepare for the situation (through knowledge and training) and limit the amount of weight they carry. They will use surprise to compensate for the reduced amount of ammunition, and new clothing and equipment developments will help reduce the weight they do carry to a minimum. (The extended cold/wet clothing system, for example, will provide better protection with less weight and bulk.) They will be resupplied by Army or Air Force aircraft or by motor transport.

Their superiors will certainly have to show a considerable amount of leadership and initiative to make sure their soldiers consume water, perform personal hygiene, protect themselves from cold weather hazards, and carry the proper load to combat.

A recommended list of minimum essential equipment is shown in Table 2. It has its roots in the following order of priority: ammunition, water, food, clothing, mission equipment, and comfort items.

In addition, the supplementary bag would contain the following: Armor vest, bayonet with scabbard, waterproof bag, sleeping bag carrier, air mattress, shelter half (with poles, pins, and rope), sleeping bag with case, duffle bag, field jacket, four MRE rations, poncho, cotton drawers, camouflage uniform, handkerchief, and two undershirts.

This recommended load is based on some restrictive assumptions:

- Current tactics and doctrine will not change significantly.
- REFORGER exercises will continue to require the greatest amount of equipment.
- Operational weather will remain moderate.

| ITEM                                     | WEIGHT<br>(Pounds) |
|--|--------------------|
| <b>UNIFORM</b>                           |                    |
| Belt, trouser                            | .20                |
| Boots, combat                            | 3.36               |
| Drawers, cotton                          | .30                |
| Handkerchief                             | .10                |
| Socks                                    | .30                |
| Uniform, BDU                             | 3.81               |
| Undershirt, OD                           | .65                |
| Gloves, shells w/inserts                 | .63                |
| Field jacket w/liner                     | 3.93               |
| <b>Total</b>                             | <b>13.28</b>       |
| <b>FIGHTING LOAD</b>                     |                    |
| Pistol belt, suspenders, First Aid pouch | 1.59               |
| Canteen, 1-qt water w/cup                | 3.00               |
| Canteen, 1-qt water                      | 1.80               |
| Entrenching tool w/carrier               | 2.52               |
| Ammunition pouch (2) w/180 rounds        | 6.21               |
| Bayonet w/scabbard                       | 1.30               |
| Weapon, M16 w/30-round magazine          | 7.91               |
| Helmet w/cover                           | 3.44               |
| Grenade, hand (2)                        | 2.00               |
| Mask, chemical                           | 2.91               |
| <b>Total</b>                             | <b>32.68</b>       |
| <b>EXISTENCE LOAD</b>                    |                    |
| Ration, combat, 2 per day (6)            | 10.50              |
| ALICE w/frame                            | 5.96               |
| Wet-weather suit                         | 1.70               |
| Poncho                                   | 1.70               |
| Sleeping shirt                           | .65                |
| Sweater                                  | .73                |
| Toilet articles w/towels                 | 2.64               |
| Cleaning kit, weapon                     | .42                |
| CPOG, complete                           | 5.75               |
| Drawers, cotton                          | .30                |
| Uniform, BDU                             | 3.81               |
| Handkerchief                             | .10                |
| Socks (2 pairs)                          | .60                |
| Undershirt (2)                           | 1.30               |
| LAW                                      | 5.20               |
| Mine, M21 (2)                            | 36.00              |
| Armor vest                               | 9.30               |
| Surface flare                            | 1.00               |
| Rounds, M60 (100)                        | 3.00               |
| <b>Total</b>                             | <b>90.66</b>       |
| <b>BED ROLL ANNEX TO EXISTENCE LOAD</b>  |                    |
| Bag, waterproof                          | .75                |
| Carrier, sleeping bag                    | .40                |
| Air mattress                             | 3.50               |
| Shelter half w/poles, pins, ropes        | 4.45               |
| Sleeping bag w/case                      | 7.50               |
| <b>Total</b>                             | <b>16.60</b>       |
| <b>WEIGHT TOTALS</b>                     |                    |
| Uniform                                  | 13.28              |
| Fighting load                            | 32.68              |
| Existence load                           | 90.66              |
| Bed roll                                 | 16.60              |
| <b>Total</b>                             | <b>153.22</b>      |

Table 1. Typical RSOP Load.

| ITEM                                     | WEIGHT<br>(Pounds) |
|--|--------------------|
| <b>UNIFORM</b>                           |                    |
| Belt, trouser                            | .20                |
| Boot, combat                             | 3.36               |
| Drawers, cotton                          | .30                |
| Socks                                    | .30                |
| Uniform, camouflage                      | 2.00               |
| Undershirt, OD                           | .65                |
| Gloves, shells w/liners                  | .63                |
| Liner, field jacket                      | .73                |
| Sweater                                  | .73                |
| <b>Total</b>                             | <b>8.90</b>        |
| <b>FIGHTING LOAD</b>                     |                    |
| Pistol belt, suspenders, First Aid pouch | 1.59               |
| Canteen, 1-qt water w/cup                | 3.00               |
| Canteen, 1-qt water                      | 1.80               |
| Ammunition pouch (2) w/180 rounds        | 6.21               |
| Weapon w/30-round magazine               | 7.91               |
| Helmet w/cover                           | 3.44               |
| Grenade, hand (2)                        | 2.00               |
| Mask, chemical                           | 2.97               |
| <b>Total</b>                             | <b>28.92</b>       |
| <b>EXISTENCE LOAD</b>                    |                    |
| Ration, MRE (2)                          | 2.56               |
| ALICE w/frame                            | 5.96               |
| Wet-weather suit                         | 1.70               |
| Sleeping shirt                           | .65                |
| Toilet articles                          | 2.64               |
| Cleaning kit, weapons                    | .42                |
| CPOG, complete                           | 5.75               |
| Socks (2 pairs)                          | .60                |
| Entrenching tool w/carrier               | 2.52               |
| LAW                                      | 5.20               |
| Cap, field                               | .26                |
| <b>Total</b>                             | <b>28.26</b>       |
| <b>WEIGHT TOTALS</b>                     |                    |
| Uniform                                  | 8.90               |
| Fighting load                            | 28.92              |
| Existence load                           | 28.26              |
| <b>Total</b>                             | <b>66.08</b>       |

Table 2. Recommended Minimum Essential Load.

•Resupply will be available to the troops on the ground.

•The Soviets will remain willing to use nuclear and chemical weapons to ensure success.

The omission of any one of these conditions would drastically change the list of minimum essential equipment.

The uniform items on the list will provide protection from the climate while a unit is on the move. The fighting load contains water, limited NBC protection, and enough ammunition to protect against dismounted infantry attacks or to strike offensively with well-aimed fires.

## FORUM & FEATURES

The existence load contains an adequate amount of food, protection for continued adverse weather, limited hygiene protection, extended NBC protection, and a means of countering armored forces (LAW) and of providing cover from small arms fire (entrenching tool).

The supplementary load provides the items needed in special situations — a sleeping bag for extended periods in one location, for example, and a bayonet for civil disturbance actions. This load can be delivered by air or motor transport when the time, the assets, and the situation call for it.

In short, we must learn to analyze loads

according to actual need on the basis of METT-T, not according to possible need. In addition, equipment should be designed and worn to distribute weight to as many muscle groups as possible and to avoid sensitive areas of the body.

Our commanders at all levels must acknowledge the fact that no matter how much training they do, they cannot change the nature of a man's physical capabilities. They must establish a doctrine on load control, preferably at Department of the Army level, and an absolute weight limit for men in combat. Then leaders at all levels must enforce the load control system through effective

leadership, including a rigid inspection system.

Finally, infantry units must train with realistic loads at all times. Only after these steps are taken can the "light" be put back into infantry.



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## Alpini: Meet the Mountain Men

JACK BARHAM

Unless you've been stationed in Southern Europe, you may not be aware that our NATO ally Italy maintains the largest force of mountain troops in the free world. And unless you've had a chance to watch a company of Alpini moving across a mountain snowfield bearing all their weapons and equipment, *on all-purpose military skis, and at a pace that leaves the average sport skier with specialized equipment floundering in their wake*, you may not know that they are also the *best* mountain troops in the world.

Unless you are pretty familiar with mountain warfare tactics, you probably don't know that Italy is the last of the world's industrialized nations to maintain mule stables in their modern army. Despite many innovations in mountaineering machinery, nobody has found a substitute for getting heavy and medium mortars into places the Alpini like to shoot mortars from, which is to say the peaks of alpine mountains accessible only to mules, mountain goats, and Alpini soldiers. (They also use helicopters and an ingenious tracked, mechanized sled called an "Alpini scooter," but nothing

can move through a cloud over a treacherous mountain trail so well as an Alpini mule.)

Italy borders France, Switzerland, Austria, and Yugoslavia. Any force invading Italy by land would have to pass over mountains. Internally, the land mass of Italy ranges from mountainous to hilly, with very little really flat terrain. So it makes sense for the Italians to maintain a fairly large body of mountain troops, and to make sure that these troops are very good at what they do.

Thus the Italian Army 4th Corps (Alpini), which presently consists of five brigades, is simply a necessary military force, fitted and trained for its mission. It is, in fact, a well fitted and superbly trained military organization.

Each brigade is composed of three or four battalions of mountain infantry, a battalion of mountain artillery, with varying numbers of mountain engineers, signalers, and logisticians.

There is even a battalion of Alpini paratroopers who go looking for drop zones that sane jumpers have nightmares about.

The most impressive demonstration of

mountain warfare skills ever observed by the writer occurred at a couple of renditions of CaSTA. That's the Italian acronym for *Campionati sciistici della Truppe Alpini* or Alpini Ski Championships. Each year the brigades send their best military skiers to a designated location in the Italian Alps to compete in the kind of skiing Alpini do — that is, tactical, cross-country, all-terrain, full load-bearing. Most of the events are squad and platoon level races of varying distance over terrain that would tear a snowmobile apart.

Tactical units (squads and platoons must be honest — no ringers) race against time and each other and fire their weapons against still and moving targets along the way. In some events the unit cannot continue the race until all of its targets have been hit. In others a distance penalty is assessed for every miss. To win a CaSTA event is, in peacetime, the greatest possible achievement for an Alpini squad or platoon leader.

Being able to do that kind of skiing with one's company builds a good measure of esprit de corps, but the Alpini professionals build on these activities to